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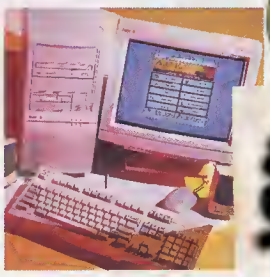

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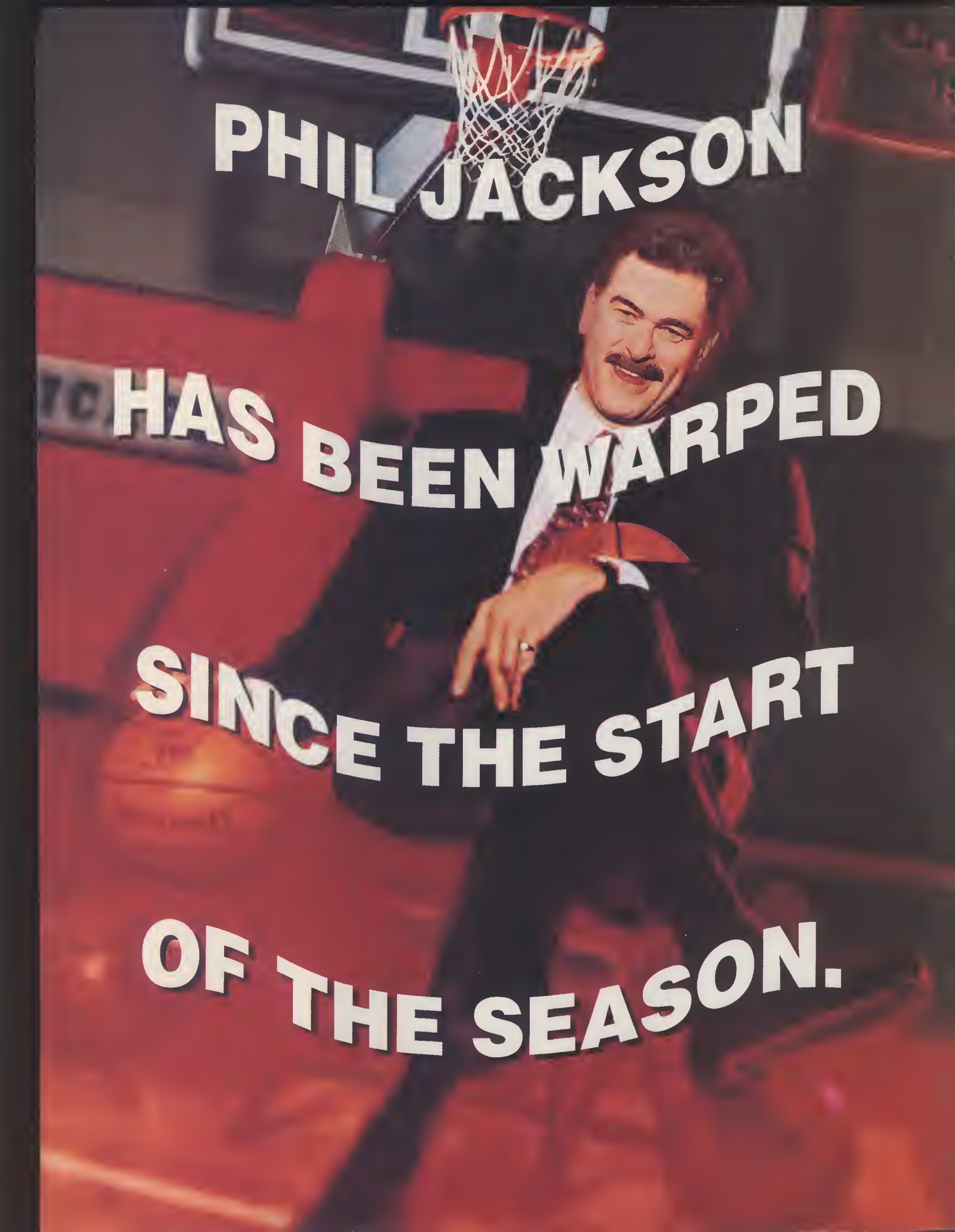
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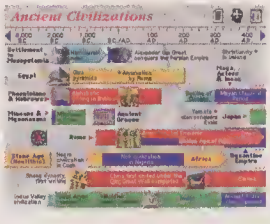

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Online Common Sense

WOULD YOU LET YOUR CHILDREN run loose in a city of two million strangers? Even more unimaginable, would you leave them alone in a city where no one is accountable for his actions, no matter how offensive or abusive? If you're letting your kids roam unsupervised in today's online world — whether a commercial service or the vast Internet — that's the kind of place they could be visiting.

As a father and the editor of a family computer magazine with its own area on America Online, I have mixed feelings about families' rush to the online world. I marvel at preteens who routinely chat with their "best friends" clear across the country or even across the world. In many cases, these are friends that have never met in our generation's terms (in person or even on the phone).

Besides being a great way for children to get to know kids they might otherwise never meet, online services are a great resource for families. You'll find powerful research tools and vast amounts of information on just about any subject, accessible right from your family room.

For all the positive attributes of the online world, however, the lack of accountability due to users' anonymity is an issue parents can't overlook. In no other part of our society can people be abusive or offensive without severe consequences. The situation is even more disturbing when you think of these offenses aimed at children, yet it happens daily on bulletin boards and chat areas of all the major online services and the Internet. Even in our forum on America Online, a small group of users posted obscene jokes in the MegaZone area, a place designed just for kids. The messages were deleted almost as soon as they were posted; however, it's easy for members to change screen names, so it's possible for the unwelcome users to come back.

Online aliases may be liberating and exhilarating for some, but without policies ensuring that users are accountable for their actions, online services will not reach their full potential as a safe, welcoming community for parents and kids to visit and enjoy.

Until those "safe, well-lighted" services exist, you must supervise your child's online activities. You should visit the different child and family areas yourself first to see if the language and behavior are acceptable for your children. You should provide your kids with the same kind of commonsense advice you would give them before turning them loose in the nonelectronic world: don't give strangers your address and phone number, don't arrange face-to-face meetings with strangers, ask Mom or Dad if you've got any doubts, and so on.

GREG FOSTER

Unlimited Potential Online services offer students access to a world with no boundaries (see page 136).

With common sense and caution, your family will find much to enjoy in today's online world. In fact, we devote a substantial percentage of our pages to locations online — locations your family should visit for entertainment, information, and inspiration.

The online community is still young, and it needs to provide a greater sense of security for family users. The communication, information, and entertainment potential won't be realized until parents can feel confident that their children's electronic journeys will be safe ones.

—Jake Winebaum
Editor & Publisher

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And There Was Music

Your magazine is tops. The eye-catching, ear-opening article in "Buried Treasure" (Help!, January/February issue, page 52) did indeed open a treasure — my CD Audio program.

Thank you for making my computing experience a more enjoyable one.

Mark Kozak
Center Harbor, New Hampshire

Grand Advice

I enjoyed the November/December issue of your magazine. I found much of value to me and my family. I am a 56-year-old grandmother with two grandsons (ages 3½ and 6½) and one husband of 35 years who's a computer professional.

My husband and I have used computers since the 1950s. We still have three Osbornes. We also have an IBM ValuePoint (running OS/2) with a CD-ROM drive. Since my husband monkeys with the IBM so much, it seems to be down a lot. That's why I bought a new Toshiba Satellite laptop. My husband isn't allowed to do anything to it without telling me. I'm a published poet and writer, and I need to have Word for Windows always running for my writing.

Anyway, I want to know more about children and computers to give my grandkids a good start, and I appreciate the readability of your magazine.

Elsie Feliz
Sacramento, California

Ready to Buy

I am a PC power user at work, and I have held off on buying a home computer until now because I felt that it would be little more than an expensive toy.

After reading through your magazine (I couldn't put it down — literally walking in the street reading it), I see just how far home computers have come. With several school-age children and with PC prices falling into the affordable range, I expect to purchase a multimedia computer within the next two months.

FamilyPC's software and hardware reviews will definitely influence my buying decisions. I have long used reviews in *PC Magazine* (*FamilyPC*'s sister publication) in recommending hardware and software for my company. I was just about to write and suggest that it include reviews of home-market software when I discovered your new magazine.

Yonah Bergstrom
Brooklyn, New York

Mac Means Multimedia

I was excited to see your cover story on multimedia upgrade kits (January/February issue). Then I realized you were dealing with multimedia for DOS/Windows machines, leaving us Mac users out in the cold. I am interested in upgrading my Mac (a Performa 460) to multimedia, and I have the same questions you addressed quite well for DOS/Windows users.

Bob Neidinger
St. Joseph, Missouri
AOL screen name Teach409

When it comes to multimedia, you and other Mac users should never feel left out in the cold. Quite simply, there are no Macintosh multimedia upgrade kits — because there is no need for them. All Macs come with built-in sound. The only item a Mac owner might need to upgrade to multimedia is an external, double-speed CD-ROM drive. — The Editors

Don't Forget the Mac

I read the *FamilyPC* Special Holiday Issue (November/December), and I have never been so enthusiastic about a magazine. I read it from cover to cover. I have told four friends about *FamilyPC*, and each of them has subscribed after reading one issue, just as I have.

I do have a couple of suggestions, though: how about how-to articles on making homework assignments more easy and fun to do? My son garnishes daily homework assignments with color photos he imports from CD-ROMs and clip-art drawings.

I use a PC at work and a Macintosh at home. The main reason I love your magazine is that it addresses both PC and Mac users. Never lose sight that, despite their numbers, Macintosh users are an overlooked group. There is less software available for Mac users, and what is available (desktop publishing programs, for example) is high-end and expensive. Similarly, there is a need for non-technical articles for Mac users. For example, you had a great article on how to turn artwork into a screen saver using your PC (My Great Idea, page 85), but you never told us whether it was possible to do this on a Mac. You also had a great *FamilyPC* How To Tip on page 297 about working with Corel Gallery in Microsoft Word. I struggle with using this great Gallery CD on my Mac and would have liked to read the same tip in Macintosh terms.

Patrick Millikan
South San Francisco, California

Corrections

In the November/December issue, *FamilyPC* mentioned Signature Software's PenFont (Advent Invites, page 147), software that turns your handwriting into a custom font. However, we failed to include a phone number for Signature Software. The number is 503-386-3221.

In the January/February issue, we listed an incorrect phone number for iMHOTep, by AfroLink Software. The correct numbers are 213-731-5465 and 800-442-3765.

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Wanted: Your Great Ideas

Is there something unique your child (or your whole family) does with a computer you think would be of interest to other families? Each issue, in My Great Idea, we'll highlight the best family computing idea and the family that thought it up. Please submit *your* great idea in a letter to My Great Idea Editor, *FamilyPC,* 244 Main Street, Northampton, MA 01060. Fax: 413-582-9070. America Online: screen name `FamilyPC`. Please include a daytime telephone number for verification purposes. We'll pay $25 for each great idea we use.

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If your child is into doing neat tricks on your family's computer, have him tip us off. Each month our *MEGAzine* editors will publish the best ideas, questions, and jokes they get. Address letters to *MEGAzine, FamilyPC,* 244 Main Street, Northampton, MA 01060. Fax: 413-582-9070. America Online: screen name `FamilyPC`. Please include a daytime telephone number. For every idea we use, we'll send out a serious *MEGAzine* surprise.

Fun & Creative Computing

Is there an interesting or fun project you and your kids do on your computer? Describe the project and how you did it, and it might appear in our Creative Computing or Fun section. Drop a line to Creative Computing Editor, *FamilyPC,* 244 Main Street, Northampton, MA 01060. Fax: 413-582-9070. America Online: screen name `FamilyPC`. Please include a daytime telephone number. We'll pay $25 for each idea we use.

Maybe We Can Help!

If your sound card won't play music, your printer stopped printing, you keep getting cryptic error messages, or your system just plain won't work, maybe we can help in our Help! section. Send your questions to Help!, *FamilyPC,* 244 Main Street, Northampton, MA 01060. Fax: 413-582-9070.

Tell Us How We're Doing

We'd like to hear what you enjoyed, didn't enjoy, and want to see from *FamilyPC* in the future. Please fill out our Reader Survey on page 249 or send letters, ideas, and suggestions to Letters to the Editor, *FamilyPC,* 244 Main Street, Northampton, MA 01060. Fax: 413-582-9070. America Online: screen name `FamilyPC`.

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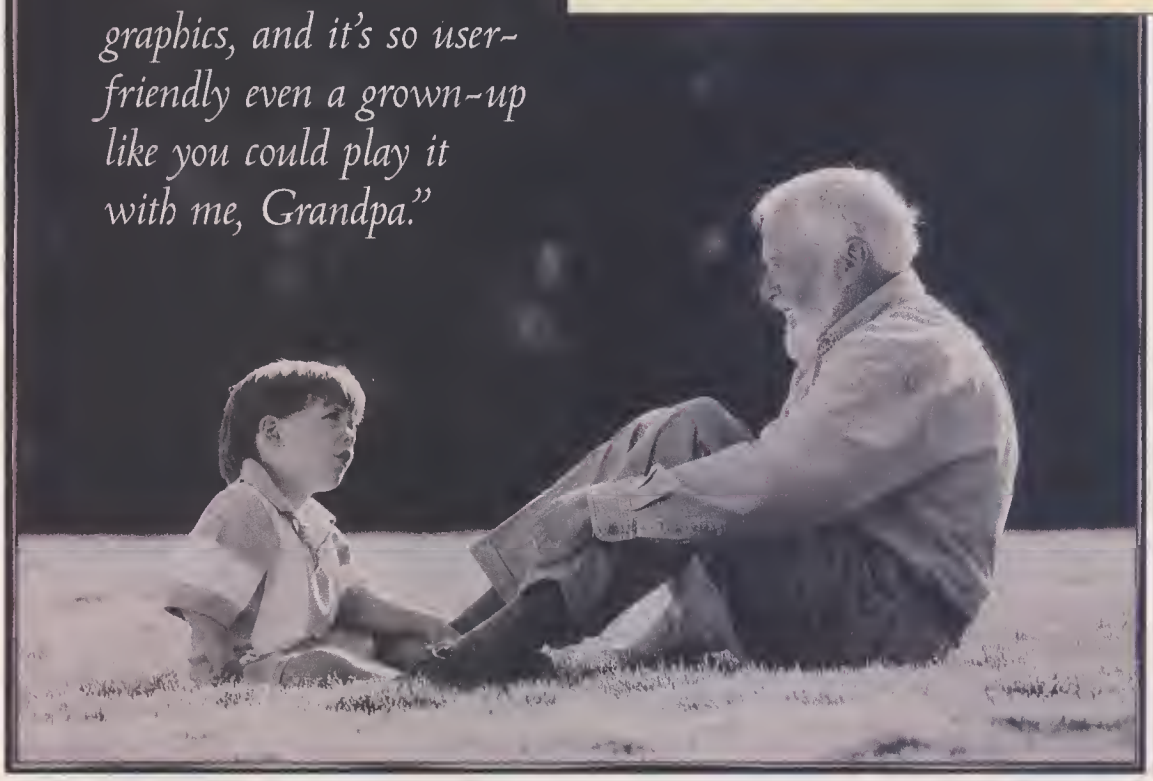

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KEEPING PACE

WHAT'S NEW FOR FAMILIES

Your Computer Home

HOME, SWEET HOME — that's the concept behind Microsoft's new Microsoft Bob for Windows-based systems. Microsoft Bob — the name was chosen to be as nonthreatening as possible to nontechies — gives your computer a new look by replacing Program Manager group boxes, menus, and icons with cozy rooms you can arrange and redecorate to your liking. It uses rooms to provide a common environment and interface to an integrated package of home and family applications that includes Calendar, Checkbook, family databases, and E-Mail. You can also launch standard DOS and Windows programs from Microsoft Bob.

Each member of your family can have a separate room in Microsoft Bob. What's more, you won't be alone keeping house. Microsoft made a study of what makes people feel comfortable with their computers, and the result is what Microsoft calls a *social interface*. Microsoft Bob homes are hosted by colorful animated characters called *guides*. You can choose from more than a dozen animated characters from the Microsoft Bob Album of Guides, a sort of portfolio of mascots.

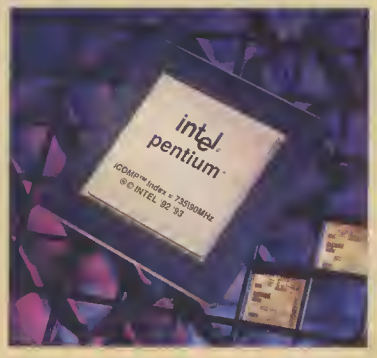
The guides make noises, move around, offer tips and shortcuts, and make you smile (or grimace). Each has a distinct personality, such as Rover the loyal dog, Blythe the feisty firefly, Chaos the snoozy cat, Java the rambunctious dragon,

Working with Bob GeoSafari integrates directly into the Bob environment.

The Pentium Recall

LAST OCTOBER, THOMAS NICELY, a mathematics professor at Lynchberg College in Virginia, announced the existence of a bug in the Intel Pentium chip. The bug produces incorrect answers in a very limited number of double-precision floating-point division (FDIV) operations.

Intel's initial response — that it would replace chips only where end users could show they were at risk from the bug — brought a firestorm of protest, especially when it was learned that Intel had known of the bug for several months but hadn't made the information public. Bowing to consumer pressure, Intel agreed just before Christmas to replace any Pentium chip, no questions asked.



Math Challenged The uproar about a bug in the Pentium floating-point unit has forced Intel to replace defective chips.

If you want to perform the replacement yourself, call Intel customer service at 800-628-8686, giving your name, shipping address, current system, and chip speed. You'll be given a case number. After a few weeks, Intel will call to confirm the processor you need and ask for a credit-card number (as insurance that you'll send back your defective chip). Intel will then ship the replacement Pentium. If you don't want to perform the replacement yourself, check with your dealer, system vendor, or service center on how to get your new Pentium.

—Bob Ryan

Ruby the grumpy parrot (à la *Aladdin*), and Scuzz the ne'er-do-well grunge rat.

While your guide rarely speaks to you, it makes noises that let you know it's there. When it has something important to tell you, a cartoon balloon pops up containing its words. The balloons are one of the best things about Microsoft Bob: it uses full sentences to explain difficult concepts, rather than a single word on a menu.

In fact, menus get short shrift in Microsoft Bob generally: there's no menu bar spanning the top of the display. Instead, Microsoft Bob is a just-in-time interface that's there when you need it but otherwise stays out of your way. If you need to do something, you simply click on an object that relates to the action you want to take. For example, say you want to change the view out of the windows in a room. Just click on a window, and Microsoft Bob pops up a palette of scenery choices. Or, if you're not sure what to do, your character is always ready to show you a menu of options.

Microsoft Bob also comes with an excellent starter set of applications. The ones we like best are GeoSafari, a colorful and animated geographical learning game for kids and adults, and E-Mail, which is the simplest and most effective means of setting up and using electronic mail we've ever seen. Microsoft Bob E-Mail uses a service provided by MCI Mail that, for $4.95, lets you send fifteen messages per month to anyone on any e-mail service, including the Internet. Other Microsoft Bob applications are Letter Writer, Calendar, Address Book, Financial Guide, Checkbook, and Household Manager.

What makes these applications unique is how they work together seamlessly through Microsoft Bob. Each application knows your preferences and shares data without any input from you; for example, Address Book can supply information automatically to E-Mail and Letter Writer. And with these applications you get the same kind of help from your animated guide that you get with Microsoft Bob itself. Microsoft expects to release other Microsoft Bob applications in the future.

Bob is easy to understand — so easy, in fact, that you'll literally learn by clicking. The unanswered question is whether the homey interface will grow tiresome as you master the Microsoft Bob applications. That's a question we plan to put to our *FamilyPC* family testers as soon as Microsoft Bob hits the streets.

Microsoft Bob is scheduled for a March 1995 release. It requires 8 megabytes of memory and will sell for $99.

—Scot Finnie

Zip Drive

If you are running out of hard disk space, need to transport lots of data between home and office, or are looking for a convenient way to back up parts or all of your hard drive, check out the Zip drive from Iomega (800-777-6654 or 801-778-1000), which is expected to be available by the time you read this. It uses removable 3½-inch disks to store up to 100MB of data. The drive, which connects to the external SCSI port of either a Mac or a PC, transfers data at rates of up to 72MB per minute — about one-third the speed of the average hard drive. A parallel port model (with a lower transfer rate) is in the works.

Space Saver With its removable disks, the Zip drive guarantees you'll never run out of space.

The Zip drive comes with ZipTools, a set of utilities with features your family will find useful. Using a utility that indexes the contents of disks, you can give each member of your family a personalized disk for private data storage. A backup utility lets you back up the contents of your hard drive onto multiple Zip disks, while a compression utility lets you store up to 200MB of data on a disk. The Zip drive sells for $199.95; individual disks sell for under $10 (25MB) and under $20 (100MB).

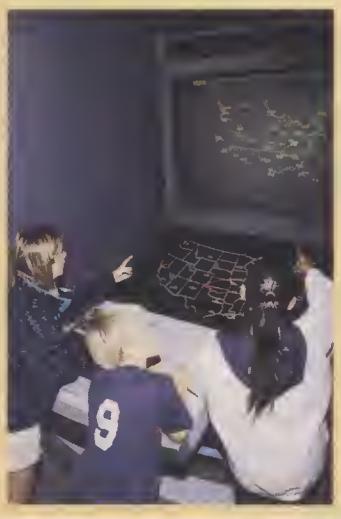
—Josiah Yegerlehner

Walk the Information Highway

A new permanent exhibit at The Computer Museum in Boston (617-426-2800) lets you take a virtual trip on the Internet. The Networked Planet: Traveling the Information Highway makes the invisible visible.

When you enter the exhibit, you get a key card that logs you on to the network. Electronic personalities guide you through the exhibit, integrating hands-on activities with video presentations. For example, a live feed from the FAA lets you track commercial airplanes in the sky over the U.S. and then zoom in on a specific airport to watch planes take off and land. Admission is $7 for adults and $5 for students and senior citizens. Children under four are admitted free.

—Anne Fischer Lent

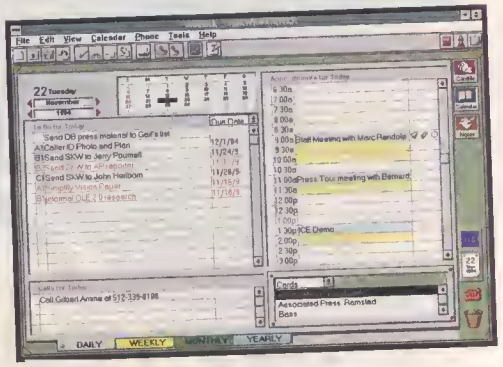


What's Up, Doc? Watch the skies anywhere in the U.S. at The Computer Museum.

Borland Utilities Get Online Smarts

Borland's Simplify division is adding online smarts to two very successful products — Sidekick for Windows and Dashboard 2.0 for Windows (recently acquired from Hewlett-Packard). Sidekick is a personal information manager (PIM) that provides a calendar, notes modules, and a fully user-definable card-file-style address book. Dashboard is a collection of utilities and panels that's designed to make working in Windows 3.1 faster and easier.

Borland is working to make files filled with various information — from football schedules to address lists of the stars — available to download for Sidekick, thus making it a more general-purpose information tool. A version of Dashboard specifically for Windows 95 and a new version that will allow users to automatically download new modules are in the works.



Broad Reach The new Sidekick lets you integrate information from online services with your personal information.

By the time you read this, Borland is expected to make thirty-day versions of both Sidekick and Dashboard available on the World Wide Web, FTP sites, CompuServe, America Online, and its own bulletin board. Both products will be unlockable — you can call a toll-free number before the end of the trial period to purchase the software for unlimited use. Unlocking Sidekick costs $39.95; Dashboard is $49.95. For each, there is a $5 shipping and handling fee for Borland to mail you a disk and manual. If you don't have online access, you can get trial versions for $5 by calling 800-533-0004.

—Eric Griffith

Color to Dye For

Eye-Popping Color The SuperScript Color 3000 produces the best color of any under-$1000 printer.

The SuperScript Color 3000 (NEC Technologies, 800-632-4636 or 508-264-8000, $995 street price) is an exciting new printer that offers photo-realistic color printing at an unheard-of low price. By using a technology called *dye sublimation*, it produces output comparable to that of $5000 color laser printers. The drawback is that dye-sublimation printing is extremely slow and extremely expensive — ten minutes and about $2.50 per page. The SuperScript Color 3000 is not a general-purpose printer, but it is one you should consider if you need near-commercial-quality color output from your personal computer.

—Jon Pepper

Microsoft Network

When the new Windows 95 operating system ships this August, it will come with all the software you need to access The Microsoft Network, a new online service that Microsoft says will provide the staying power lacking in many other commercial online services.

The Microsoft Network is slated to be available worldwide in thirty-five countries and up to twenty languages, with access speeds of up to 14.4 kilobits per second — as fast as or faster than the current crop of online services. While pricing had not been set at press time, Microsoft has said it expects to at least equal the best prices in the online market.

According to Microsoft, the big push behind this service will be content, though the company is sketchy about details. Areas of coverage will include Home and Family, Arts and Entertainment, and Community and Public Affairs. Also look for the ubiquitous chat areas, bulletin boards, download libraries, Internet access, and e-mail capability. In addition, the service will feature extensive online support for Microsoft software products.

At press time, TCI, a leading cable company, acquired twenty percent of the network, fueling speculation that it might one day be available via cable.

—Eric Griffith

Into the Breach Microsoft thinks it has a better idea with Microsoft Network.

Bigger Computer Animations

Ever wonder why video clips from your CD-ROM encyclopedia appear so small on your computer display? The reason is that even the most powerful PCs are incapable of moving data fast enough to create videos and animations at thirty frames per second — the rate we're used to from watching TV and videos. As a result, most computer-based video playback schemes compromise display size, frame rate, or both.

MPEG is a compression standard for full-motion video that reduces the amount of data needed to create the individual frames of a video clip, thus making possible larger displays and higher frame rates. Because the MPEG algorithm uses math functions not easily performed by standard CPUs, most MPEG setups require an expansion board that contains a decoder chip.

Despite its capabilities, MPEG has thus far been a niche technology, due to limited software support. But that is now changing, because a consortium of MPEG and graphics vendors have agreed on standard software interfaces for DOS and Windows. This means you'll be able to run any MPEG software on any MPEG hardware system, thus eliminating the fragmentation that has bedeviled the MPEG market.

With the software pieces falling into place, MPEG pioneers such as Sigma Designs and Jazz Multimedia are being joined by a growing number of graphics card makers offering MPEG decoders both as stand-alone cards and on graphics cards. TeleVideo Multimedia (408-954-8333), for example, offers TeleMPEGPro ($349), an MPEG card that connects to any graphics card that supports the VESA Standard Feature Connector. Other big names getting into MPEG include Matrox, Diamond Multimedia Systems, Orchid Technology, and Trident Microsystems.

—Bob Ryan

ILLUSTRATION BY ANDREA DERVOSE

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The preloaded software

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- The Oisney® Preview of 11 Disney software titles, including Animation Studio and Aladdin Print Kit (worth $299 for only $79 when you call for the unlocking code)
- IBM PC OOS 6.3, Microsoft® Windows 3.11, PFS: Window-Works™, Quicken Special Edition, Reuters® Money™ Network, FaxWorks™, The PROOIGY® Service with IBM Club™3, Journalist™, America Online®4, IBM Connection™, IBM Online Housecall (online diagnostics)

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The Latest in Modems

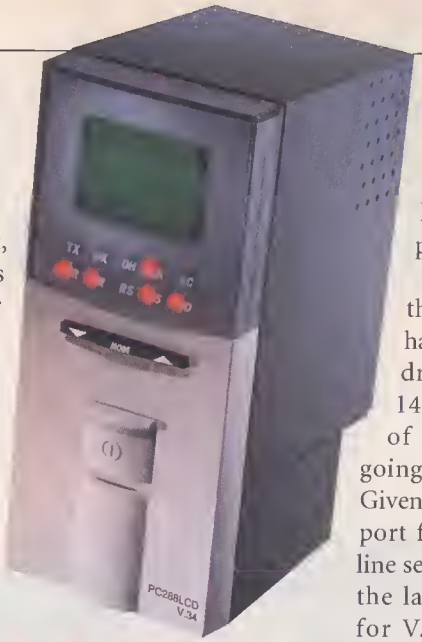
For your modem to talk to the modems at Prodigy, CompuServe, and your local bulletin board system, it must adhere to standards set by the ITU, the International Telecommunications Union. Last year, the ITU finally approved a standard called V.34 that lets modems communicate at 28.8 kbps, which translates into about 500 words of text per second. Also included in V.34 is a compression method that theoretically can increase data throughput by a factor of four.

With the arrival of V.34 comes a flood of new offerings from modem vendors. Microcom, Practical Peripherals, US Robotics, and many others have jumped into the V.34 market, some with offerings that may soon sell for $200 or less on the street.

When shopping for the latest and greatest modem, however, don't be confused by interim standards such as V.terbo and V.fast, which were developed while companies were waiting for the ratification of V.34. Modems that support these standards are OK as long as they also support V.34.

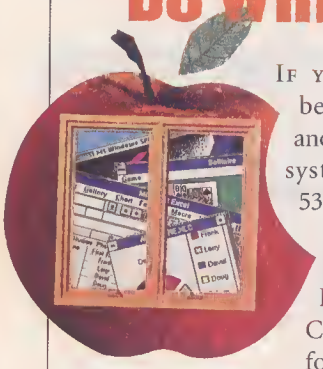
One fallout from the emergence of V.34 has been a precipitous drop in the prices of 14.4-kbps modems. As of this writing, the going price is about $80. Given the expanding support for 14.4 kbps by online service vendors — and the lack of such support for V.34 — a 14.4-kbps modem is currently the most cost-effective vehicle for getting online.

—Bob Ryan



New Wave Practical Peripherals' 288LCD heads up the company's V.34 line of high-speed modems.

Power Macs Do Windows



If you can't decide between a Macintosh and a Windows-based system, Apple (800-538-9696 or 408-996-1010) has a solution for you. Its DOS Compatibility Card is a $739 option for Power Macs and Performa 6100 series computers that lets those systems run DOS and Windows software without losing their capability to run Macintosh software.

Multiple Personalities The DOS Compatibility Card turns Macintoshes into DOS/Windows machines.

The DOS Compatibility Card includes a 66-MHz 486DX2 processor that runs PC instructions. The card goes into the CPU slot of Power Mac 6100 and Performa 6100 series computers. Because it is a couple hundred dollars cheaper than buying a complete DOS/Windows system, the DOS Compatibility Card is the most cost-effective way for a Mac owner to run DOS and Windows software.

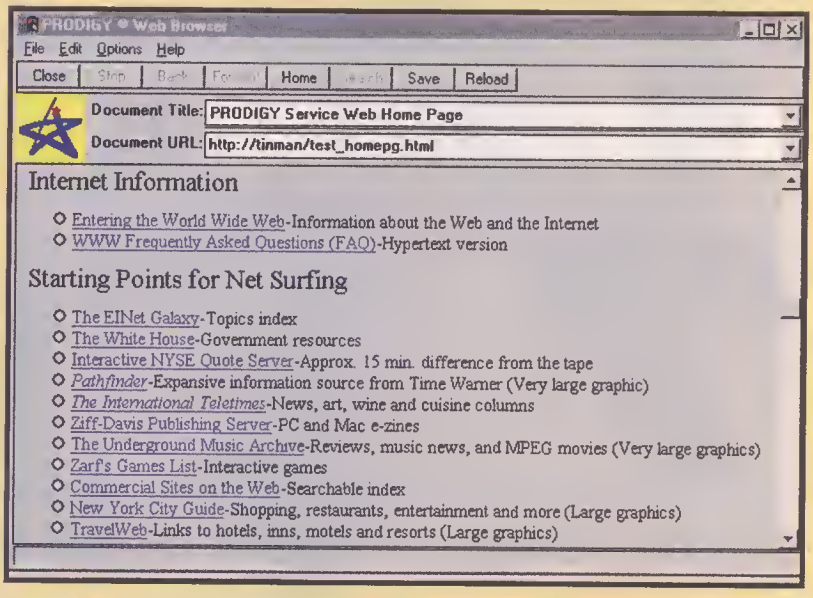
—Bob Ryan

Get On the Web

If a picture is worth a thousand words, an icon (especially one that links you to a distant information source) is worth at least a couple dozen commands.

Prodigy's new World Wide Web Browser offers a graphical look at information stored on the Internet — the sprawling interconnection of networks and computers located all over the world. Using the browser, you can click on "hot links" to travel from resource to resource. No more typing in long URL (universal resource locator) addresses or sifting through page after page of menu choices. Prodigy's new feature is based on Mosaic, the popular Internet GUI (graphical user interface), and is available as part of Prodigy's basic services.

—Joe Panepinto



Easy Web The blue text items are actually hypertext links that take you across the Internet to a world of information.

ILLUSTRATION BY ANDREA DEBEVOISE

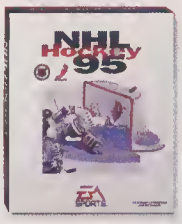
Announcing Columbia House CD-ROM Direct.
Everything from games to reference to "real-world" entertainment.

Rebel Assault
Arcade Game 5007000
DOS | 386 | 4mb | M | J
MAC | LCII | | K |

Where In The World Is Carmen Sandiego Deluxe
Children's Ed. 5016605
WIN | 386 | 4mb | M
MAC | Class. | | |

Microsoft Musical Instruments
Music 5012802
WIN | 386 | 4mb | M
MAC | LCII | | |

Myst
Interact. Game 5004304
WIN | 386/33 | 4mb | M
MAC | Class. | | |



NHL Hockey 95
Sports 5007505
DOS | 386/33 | 4mb | M | J
| | | | K |

Guinness Disc Of Records
General Interest 5009204
WIN | 386 | 4mb | M
MAC | LCII | | |

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How To Select CD-ROMs For Your System.

WIN / MAC	386 / LCIII	4mb	M / K / P
SYSTEM	CPU	RAM	PERIPH.

SYSTEM Button indicates the available operating environment(s) for a given selection: DOS (for PC), Windows (for PC), Macintosh.

CPU Button indicates the *minimum* processor required. If a title is available in PC and Macintosh formats, the top half of this button represents PC system requirements and the bottom half represents Macintosh system requirements. Note: Ser.=Series, Class.=Classic, Pent.=Pentium. For Mac – LC series includes LC 475, Performa 475, Quadra, Centris, Powerbook 180C, IIFX or better.

RAM Button indicates the *minimum* amount of RAM required.

PERIPHERALS Button indicates required peripherals. M=mouse, J=joystick, K=keyboard, P=printer.

For all titles, the *minimum* system requirements recommended (unless otherwise indicated) are: Hardware: SVGA monitor (256 colors), sound card, 40MB hard drive, double speed CD-ROM drive. Operating System: DOS 5.0, Windows 3.1, Macintosh System 7.0.

Leonardo
Historical 5020003
WIN | 386 | 4mb | M
MAC | LCII | | |

Armored Fist
Arcade Game 5022405
DOS | 386/40 | 4mb | M | J
| | | | K |

MacMillan Dictionary For Children
Children's Ed. 5019005
WIN | 386 | 4mb | M
MAC | LCII | 5mb | K | P

Parenting
Home/Personal 5010905
WIN | 386 | 4mb | M
| | | | P

Alge Blaster 3
Children's Ed. 5019203
WIN | 386 | 4mb | M
| | | | K

The New Kid On The Block
Children's Ed. 5018304
WIN | 386 | 4mb | M
MAC | LCII | | K

The 7th Guest
Interact. Game 5004700
WIN | 388/33 | 4mb | M
MAC | LCIII | | |

Inherit The Earth
Advent. Game 5002100
DOS | 386 | 4mb | M
MAC | LCIII | | K

Microsoft Bookshelf
General Ref. 5009402
WIN | 386 | 4mb | M
MAC | LCII | | |

System Shock Enhanced
Arcade Game 5022900
DOS | 386/40 | 4mb | M | J
| | | | K |

AAA Travel Planner
Travel 5011606
WIN | 386 | 4mb | M
| | | | P

The Residents: Freak Show
Music 5013909
WIN | 386 | 4mb | M
MAC | LCII | | |

Doom II
Arcade Game 5021506
DOS | 386/33 | 4mb | M | J
| | | | K |

Aegis-Guardian Of The Fleet
Naval Simulation 5001102
DOS | 386 | 4mb | M
| | | | K |

Wines Of The World
Home/Personal 5011101
WIN | 386 | 4mb | M
MAC | Class. | | K |

Peter Gabriel: Explora 1
Music 5013404
MAC | Class. | 4mb | M
| | | | K |

Prehistoria
Historical 5009105
WIN | 386 | 4mb | M
MAC | LCII | | |

Front Page Sports Baseball
Sports 5007406
DOS | 386 | 4mb | M | J
| | | | K |

Mavis Beacon Teaches Typing
Typing Tutor 5015102
WIN | 286 | 640K | M
| | | | K |

Ruff's Bone
Children's Ed. 5018403
WIN | 386 | 4mb | M
MAC | LCII | | K |

Dark Legions
Strategy Game 5008404
DOS | 386 | 4mb | M
| | | | K |

Corel Gallery
Clip Art Library 5010301
WIN | 386 | 2mb | M
| | | | K | P

Chaos Continuum
Advent. Game 5003702
WIN | 486 | 8mb | M
| | | | |

Police Quest: Open Season
Advent. Game 5002803
DOS | 386 | 4mb | M
| | | | |

Nascar Racing
Driving Simul. 5001300
DOS | 386/40 | 8mb | M | J
| | | | K |

X-Com
Strategy Game 5008602
DOS | 386 | 4mb | M
| | | | K |

Sam & Max
Advent. Game 5001808
DOS | 388/33 | 4mb | M
| | | | K |

Bodyworks Voyager
Medical Ref. 5009709
WIN | 386 | 4mb | M
| | | | P |

Armada/Wing Commander
Flight Simulation 5000807
DOS | 386/33 | 4mb | M | J
| | | | K |

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NEW PRODUCTS

The Future Joystick (Super MS-200e)

The ultimate in control for $199.99, the Super MS-200e (aka the Super Joystick) can go from car steering wheel to bike handlebars to flight yoke. It also has pedal acceleration controls and the option of connecting a second joystick for two-player games. An included video explains setup. Call D.I.T. Export-Import Company at 800-577-7572 or 213-663-4096.

AMS SoundPro CD Notebook Computer

Joining the high-end IBM and Panasonic notebooks with full-size CD-ROM players built in, AMS's SoundPro CD notebook features one right under the keyboard. The units come with a 486DX/33 up to a DX4 running at 100 MHz — with prices from $2,550 to $3,130 for base units (not including hard drives and RAM in different configurations). All come with 16-bit sound built in, an integrated trackball, and a Type III PC Card slot. AMS can be reached at 800-515-8203 or 818-814-8851.

CD-ROM Changers ▲

If you want to avoid physically swapping CD-ROMs every time you change programs — thus keeping little hands off the sensitive underside of the disk — both Nakamichi and NEC are bringing out double-speed CD-ROM changers that will hold up to seven discs at a time, allowing you to change via software, not with your hands. Nakamichi's MBR-7 is being distributed by O.C.E.A.N. Microsystems (800-944-6232 or 714-898-1340); NEC (800-632-4636 or 708-860-9500) should have its changer available by the time you read this. Both are expected to be priced under $500.

Leading Edge Family Systems ▲

Leading Edge computers has introduced two high-end systems in its Fortiva consumer line. Dubbed the Fortiva Series 6000 Multimedia Mid-Towers, the systems come with either 75- or 90-MHz Pentium processors and a variety of memory and hard drive configurations. Also included are a double-speed CD-ROM drive, a 16-bit sound card, and a wealth of software titles. Modems are optional. Prices vary with configuration; a 90-MHz machine with 8MB of RAM and a 1-gigabyte (that's 1000MB) hard drive lists for $2799.

NEC MultiSync XV15 Value Line Monitor

The lowest priced of NEC's new lines of monitors, the XV15 is a 15-inch, flat square monitor with a 0.28-mm dot pitch and a resolution of 1024 by 768 pixels at 76 Hz (maximum resolution: 1280 by 1024 pixels). It doubles as a PC and Mac monitor — and Mac users get special DPI-on-the-Fly software to change resolutions. Windows users are not left out — the XV15 supports the Plug-and-Play standard for Windows 95. Estimated street price is $455. Contact NEC at 800-632-4636.

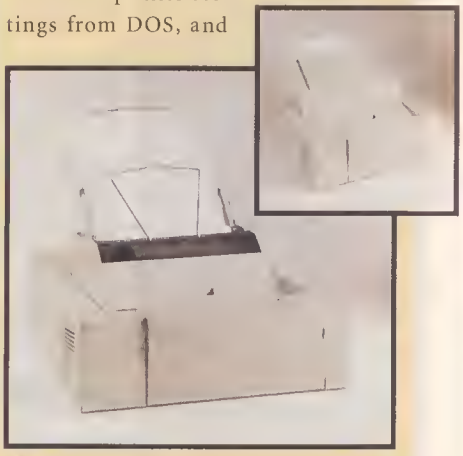
Media Accelerators

Based on the company's BtV media chip set, the Brooktree MediaStream media accelerators combine sound, graphics, and video capability on a single card. With 16-bit sound, 1280- by 1024-pixel graphics, and 30-frame-per-second video — including software-based MPEG playback — the MediaStream products are made for multimedia. Pricing was not available at press time. Contact Brooktree at 619-452-7580.

New Printers For Families

The NEC SuperScript 660 is one of the least expensive 600-dot-per-inch laser printers on the market, and it's rated at a speedy six pages per minute. Because this printer supports Windows' native printing environment (called GDI), the faster your PC, the faster your documents will move out to the printer. Plus, the SuperScript 660 is compatible with the popular Hewlett-Packard LaserJet 4P, so you know that all your software will work with it.

The SuperScript 660i is a slightly higher performance printer with a larger paper capacity (200 sheets versus 50 for the 660 model), NEC's Print Navigator software for control of printer settings from DOS, and compatibility with the LaserJet 4P. Both printers can even add spot color to your documents if you swap out the black toner for a colored print cartridge (blue, red, and yellow are available). NEC provides a two-year warranty and overnight replacement of defective models.



Matched Pair The NEC SuperScript 660 and 660i make 600-dpi printing affordable.

Pricing for the new printers was not available at press time. Contact NEC at 800-632-4636.

The products covered in this section have not been tested by *FamilyPC* editors. New Product items are based on information supplied by the vendor, product demonstrations, and interviews. Inclusion does not represent a recommendation.

Ron Kimball Photography

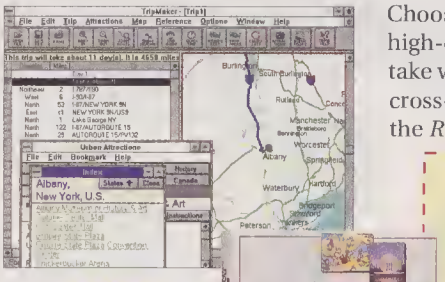
Albany to Anchorage in 26 Seconds

Rand McNally's new *TripMaker*™ software for Windows™ can route you from Albany, New York to Anchorage, Alaska in 26 seconds flat. And to virtually anywhere in the United States, Canada and Mexico. *TripMaker* does more than just plan routes, it plans entire trips. Select your origin and destination and *TripMaker* will get you on your way. Or, *TripMaker* can suggest ideal car trips based on your personal preferences – region of the country, time of year, and more.

TripMaker software includes more than 640,900 miles of roads and 125,000 cities and towns – more than any other software program. Get thousands of point-of-interest ideas with free Attraction Pack™ databases included – and *TripMaker* will route you to your choices.

America's Travel Authority™

TripMaker is based on more than a century of mapping excellence by the most recognized name in travel. *TripMaker* gives you the best map presentation and output available – both on screen and from your printer.



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System Requirements: Microsoft® Windows™ 3.1 or higher; EGA, VGA, or higher graphics card. DOS 3.3 or higher; 80386 or higher PC recommended. 4 MB RAM or more. Hard drive uses minimum 11 MB; 15 MB maximum for all databases.

"Finally a developer has created a travel planning program with real depth. Rand McNally TripMaker will be the clear category winner."
–Soft•letter 8/94

RAND McNALLY

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As a special introductory offer, Imagination Express now comes with 2 CD-ROMs—doubling your child's storytelling power!

Kids of all ages and abilities create everything from simple picture books to elaborate multimedia productions as they explore the "Destination: Neighborhood" and "Destination: Castle" CD-ROMs. The storytelling possibilities are endless!

For Macintosh and Windows CD-ROMs. Additional Imagination Express "Destinations" will be available soon.

Imagination Express and other Edmark software titles are available at Best Buy, CompUSA, Computer City, Egghead Software, Electronics Boutique, Elek-Tek, Fry's Electronics, Imaginarium, LearningSmith, Micro Center, Office Depot, Price-Costco, Software, Etc., Wal-Mart and other retail locations.

For more information about Edmark or our products call us at 1-800-691-2986.

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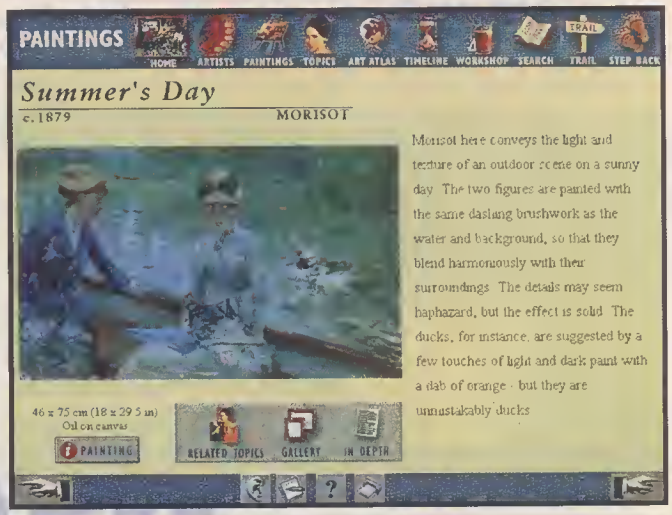
NEW PRODUCTS



The Playroom CD-ROM

Kids have romped in The Playroom since 1989, but in the new CD-ROM version, the sound is better, the animations livelier, and the surprises abundant. By exploring its scattered games and activities, kids learn to tell time with a singing clock, pick up math skills while playing against a robot opponent, learn letters and words through an animated storybook, and more. (Brøderbund, 800-521-6263, 415-382-4400, Windows CD-ROM, $40 street; ages 3 to 6.)

People Weekly — 20 Amazing Years of Pop Culture

People magazine, America's watchdog of celebrity happenings, has taken the inevitable step into the digital domain. Its new CD-ROM includes an overview of the past two decades of the magazine; the Di-O-Rama, which features articles and photos of all-time cover champ Princess Di, as well as clips from the infamous "Squidgy" tapes; video interviews with *People* editors and writers; a Star Map that explains interrelationships between the celebrities on 160 covers; and morph sequences of stars (including a sequence that shows Michael Jackson changing from the Jackson 5 kid to his more frightening present look). (Voyager, 800-446-2001 or 914-591-5500, Mac and Windows CD-ROM, $29.95.)

The Animals 2.0

There are even more animals to explore in the new version of this best-selling software, which features more color photos than the first version, full-screen video, and two hours of new music and natural sound. Aside from viewing hundreds of caged animals, kids can step outside the zoo and see a wealth of wild animals, including exotic reptiles and birds. (Mindscape, 800-234-3088 or 415-883-3000, Mac and Windows CD-ROM, $49.95.)

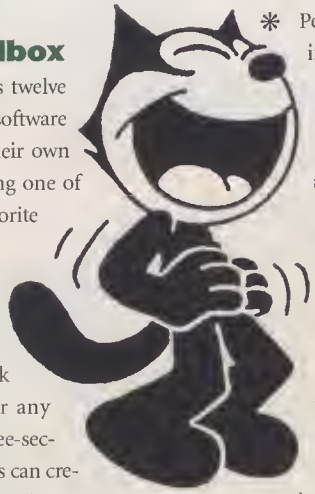
ECO East Africa

In this simulation game, players act as warden of Ethemba Park, a fictional wildlife preserve in the plains of East Africa. The preserve is in ecological trouble, and it's the warden's job to balance the ecosystem while dealing with poachers, harsh weather, and hostile natives. (IVI Publishing, 800-432-1332 or 612-996-6000, Windows CD-ROM, $69.95; ages 14 to adult.)

The World of Totty Pig

An interactive storybook based on the Ready-to-Read Series book *You Are Much Too Small*, The World of Totty Pig includes high-quality animation, loads of activities and games, and catchy original songs. The story has several different subplots, so kids won't get bored even if they play the game over and over. (Byron Preiss Multimedia, 800-482-3766, Mac and Windows CD-ROM, $39.95; ages 3 to 8.)

Felix the Cat Cartoon Toolbox



In the first of Big Top's twelve planned Felix the Cat software products, kids create their own animated cartoons using one of the cartoon world's favorite cats. Kids have a choice of seven characters and 600 backgrounds, props, and sound effects to work with. Piecing together any number of the 300 three-second animated clips, kids can create their own wacky Saturday morning cartoon in a snap. (Big Top Productions, 800-900-7529 or 415-978-5363, Mac and Windows CD-ROM, $54.95; ages 7 and up.)

*Trademark and © Felix the Cat Productions, Inc.

Great Artists

This multimedia art lesson, which was produced in conjunction with London's National Gallery, features an extensive database of forty main works and more than 1,000 other images. It also contains information on the historical context of the presented work — including what music and technology influenced the painter — as well as a workshop section in which users can compare paintings and zoom in to look at the brushstrokes of the masterpieces. (Attica Cybernetics, distributed in the U.S. by Cambrix, 800-992-8781 or 818-992-8484, Windows CD-ROM, $59.95.)

Peter and the Wolf

The interactive CD-ROM of the classic children's tale features the voices of Kirstie Alley and Lloyd Bridges and original animated characters by Chuck Jones (animation director of Bugs Bunny and the Road Runner cartoons). Kids can experiment with different instruments in the orchestra, interact with characters in Peter's meadow, and play games. It also includes an audio CD of the full production. (Time Warner Interactive, 800-482-3766 or 818-295-6600, Mac and Windows CD-ROM, $49.95; ages 4 and up.)

Ghosts

Take a tour of Hobbs Manor, a haunted house in the British countryside. Actor Christopher Lee plays Dr. Grimalkin, the owner of the virtual house. But he's the only fictional character in this CD-ROM, which features stories about real hauntings. The disc features ghost stories, spirit photographs, eyewitness accounts, spooky animations, and stories from several experts in the paranormal. After you explore the mansion, your goal is to uncover the

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truth about ghosts — do they exist or not? (Media Design Interactive, distributed in the U.S. by Sony Electronic Publishing, 800-344-4323 or 310-449-2320, Mac & Windows CD-ROM, $49; ages 12 to adult.)

Inside the SAT

Part of Princeton Review's new line of software, Inside the SAT is an interactive and slightly irreverent approach to getting high school students ready to take the college entrance exam. The program uses animation and dynamic graphics to teach the test format, and it offers strategies, hints, and problem-solving techniques. (The Princeton Review, 800-546-2102 or 212-874-8282, Mac and Windows disk, $49; CD-ROM available spring 1995.)

What the Heck Will Elroy Do Next?

The date for the tenth annual Insectathon is fast approaching, and Elroy, the defending champ, hasn't found a bug to enter yet. That's the start of the newest story from the folks at Headbone Interactive, creaters of AlphaBonk Farm (see review page 190). How it ends, however, is up to the player.

In their search for the ultimate bug, Elroy and his dog Blue must make decisions: do they replace the cake that the dog ate or do they chase that incredible bug that just flew through the kitchen? Each decision the player makes takes the story on a different branch — leading to twelve possible endings. Like AlphaBonk Farm, Elroy features animation set against photo backgrounds. (Headbone Interactive, 800-267-4709 or 206-323-0073, Mac and Windows CD-ROM, $39.95; ages 7 and up.)

Scrabble

A family favorite is now available for the home computer. Up to four people can play, using an on-screen panel of letters to make words. Or one person can play against the computer. The Official Scrabble Player's Dictionary is built in to keep you honest and help you improve your game. (MacPlay, 800-462-2752, Mac disk, $29.95.)

NFL's Greatest Plays

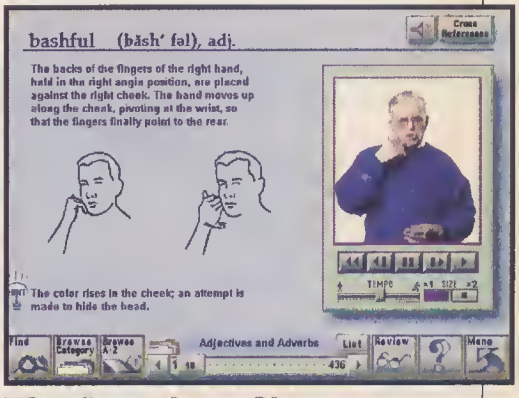
A football lover's dream, this CD-ROM features video replays of the National Football League's choices of the seventy-five all-time greatest plays. It includes, of course, Franco Harris's "Immaculate Reception" of a Terry Bradshaw pass in the 1972 Steelers game against Oakland — arguably the greatest play of all time. But unlike a video, it lets you view the plays from several camera angles, zoom in for a closer look, watch it forward and backward, and speed up or slow down the action. Most plays include an animated diagram and background on the players involved. (Turner Interactive, 800-278-4355 or 404-885-7972, Mac and Windows CD-ROM, $29.95.)

The Crucible

Drama students, historians, literature majors, and theater lovers of all stripes will learn something from this CD-ROM, which examines every angle of Arthur Miller's play about the Salem witch trials. It includes a video interview with the playwright discussing the play, and interviews with actors who played in a British production. There are also interviews with Dustin Hoffman, John Malkovich, and Vanessa Redgrave, essays on the history and background of the play, and, of course, the complete text of the play. (Penguin Electronic Publishing, 800-253-6476 or 201-387-0600, Mac CD-ROM, $64.95.)

FedEx

If you have a modem and a laser printer, you can now dispatch FedEx overnight packages from your home computer. Users can call for courier pickup, print shipping labels, and track their package along its route from their home or office. All modem connections are made by local or 800-number calls, and FedEx is giving the software away, so you have nothing to lose by trying it out. (Federal Express, 800-463-3339, Mac disk, free.)



The American Sign Language Dictionary on CD-ROM

This multimedia sign language reference and teacher is based on the book by Dr. Martin Sternberg. It uses video, animation, illustrations, and text and includes games and practice drills. Type in a word to see a video of how it is signed. Watch in slow motion or zoom in for a closer look at the finger movements and crucial facial expressions. (HarperCollins Interactive, 800-242-7737 or 212-207-7174, Mac and Windows CD-ROM, $69.95 or $79.95 with the book.)

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HELP!

by Marty Jerome and Wendy Taylor

Computers may be the key to eternal youth, since they force you to learn new things every day. But tearing your hair out shouldn't be part of the process. Help! smooths the way, alerting you to preventive measures and quick fixes to common problems. This month, don't miss our Troubleshooting suggestions, Shortcuts, and Care and Feeding.

Troubleshooting

Find out how to cure squiggly lines on your monitor, fix a mute Mac and its flashing title bar, and help out a confused Program Manager

Fixing Funky Video

Q. *I changed the video resolution on my Windows system using Windows' Setup program. Now when I try to run Windows, all that comes up on my monitor is squiggly lines. What's the problem, and how do I fix it?*

A. You've selected a video resolution or video driver (a software utility that controls the colors and resolution your system displays) that your monitor or video card can't support. Not to worry — you can easily remedy the problem.

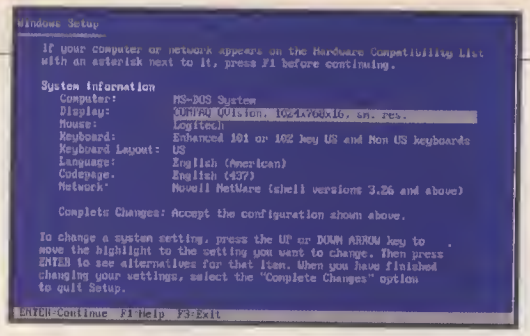
If your system loads Windows automatically, get to the DOS prompt by holding down the Control, Alt, and Delete keys until your system restarts. When the message "Starting MS-DOS" appears, press the F8 key. This tells your system to bypass the start-up file that loads Windows, bringing you to a DOS prompt instead.

From DOS's C:\ prompt, load the DOS version of Windows' Setup program by typing `C:\WINDOWS\SETUP`. Press the Enter key, and Windows' Setup utility will lumber to the screen.

Use the Down arrow key to move the cursor to the Display section. Pressing the Enter key presents you with a list of all the available video drivers. Not all of the drivers listed will work with your system. If you know which video card your system uses, scroll down the list until the driver you want is highlighted, and select it by pressing Enter. If you don't know which driver your system uses, check your system's documentation for the name of the video card and then choose the driver whose name most closely matches that of your card. If you were running a Compaq system with a QVision video card in it, for example, you'd choose a driver called Compaq QVision (see screenshot, page 46).

If none of the drivers appears to match your video card, check to see if your system came with a disk labeled *video drivers* (or simply *drivers*). If so, scroll down to the last option on the display driver list (Other), highlight it, and press Enter. Windows will prompt you to put the disk in your drive, choose the proper drive letter (A or B), and press the Enter key. You should now see a new list of drivers. Select the driver, and Setup will copy the appropriate file.

If you can't determine the name of the video card in your computer, and your system didn't come with a driver disk, you still have options. Windows comes with two generic drivers that work on any system: VGA and SVGA. The more basic of the two is VGA; if you choose VGA, your system will display a resolution of 640 by 480 pixels (or dots of light) and 16 colors. This is the resolution most games use, and it's supported by all monitors made in the last seven years. SVGA (short for Super VGA) lets your system display the slightly higher resolution of 800 by 600 pixels and 16 colors. SVGA lets you display slightly more information on your monitor than VGA does, but some Windows games and CD-ROM applications don't support it. When in doubt, choose VGA.

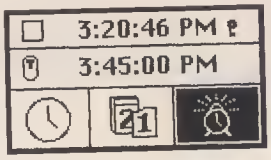


After selecting the driver you want, press Enter and follow the directions on-screen to save your changes and exit Setup. Now reload Windows (or restart your system if Windows loads automatically from your start-up files), and you're back in business.

Disco Mac

Q. *Whenever I turn on my Mac, the title bar at the top of the screen flashes and I can't hear any sound. What's causing this, and what can I do about it?*

A. One likely reason for your disco flashing is that the system alarm clock may be set. If the sound on the system is turned off, then the flashing menu bar is the equivalent of a beep. To check this, choose the Alarm Clock from the Apple menu and click on the icon that shows an alarm clock (shown, right). You may have to expand the Alarm Clock menu to full size by clicking on the lever in the upper-right corner of the menu. When you click on the alarm, the time that appears in the middle section of the menu is the current alarm setting. The button to the left of the time shows whether the alarm is on or off; click on it so that it is in the down (off) position. You can turn the sound on by choosing Control Panels from the Apple menu and opening the Sound control panel. A bar showing speaker volume will appear; drag the slide control up or down to adjust the volume.



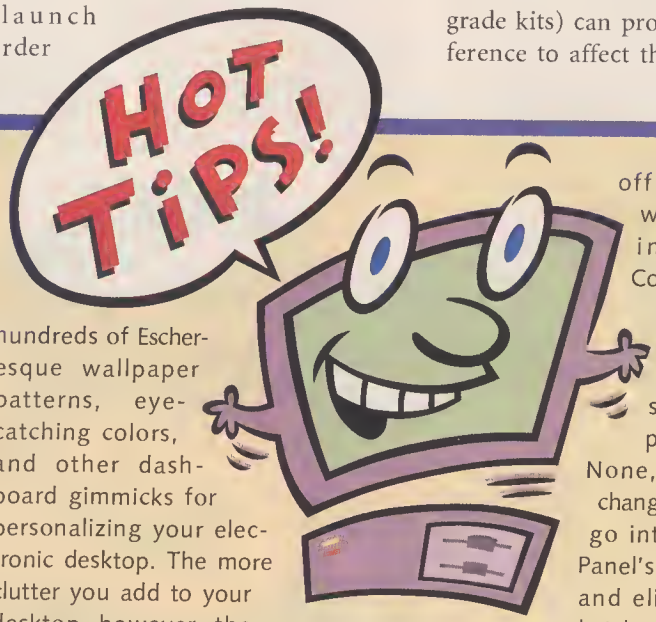
If that doesn't solve the problem, you may be experiencing an extension conflict. Extensions are utilities that load into memory during start-up to enhance or customize some part of your Mac. Restart your system and hold down the Shift key until you see the message "Welcome to Macintosh" and, below it, "Extensions off." If the problem goes away, you know that one of your extensions is the culprit.

To resolve the problem, get an extensions manager, a control panel that lets you decide which extensions and control panels load, as well as the order in which they do so (launch order can cause crashes). Two of the best are Casady & Greene's $79.95 Conflict Catcher and Inline Software's $49 INITPicker. Conflict Catcher detects the combination of extensions and applications that's causing the conflict and finds a combination that works. INITPicker automatically disables problematic extensions.

Sound Warp

Q. *I just added two items to my PC: a sound card and a set of stereo speakers. Now, whenever I try to play any music, the image on my monitor warps and the colors are all wrong. Any suggestions for avoiding this trouble?*

A. What you're experiencing is visual distortion caused by the electrical and magnetic interference (also called *noise*) generated by the speakers and monitor. All electrical devices produce at least some interference. Putting two such devices too close together can warp the images your monitor displays. Though all devices throw off some interference, some appliances are worse than others. Inexpensive speakers (like those found in many multimedia upgrade kits) can produce enough interference to affect the monitor's colors

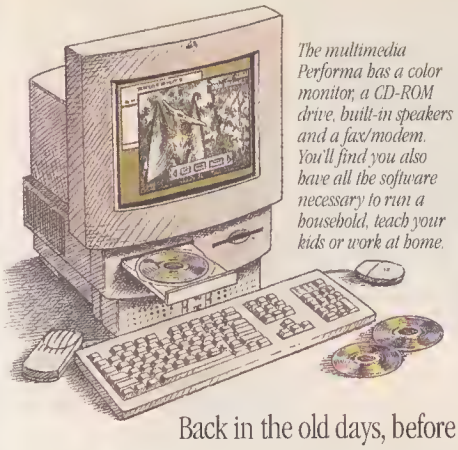


Some tricks of the trade that help you get more mileage from your PC

Money-Saving Tip: Extend the life of your laser-printer and ink-jet cartridges by adjusting the print density control (usually found on the side of the printer or near the ink or toner cartridge) to a light setting. You can always readjust it later if you need a darker print.

Safety Tip: If you ever need to open your computer's case, make sure you touch its metal side before reaching into it. Static electricity can leap from your fingers as from Shazam the Genie's, destroying delicate electronic components.

Speed Tip: Does Windows seem sluggish? You may be carrying too much overhead. Windows comes with hundreds of Escher-esque wallpaper patterns, eye-catching colors, and other dashboard gimmicks for personalizing your electronic desktop. The more clutter you add to your desktop, however, the slower your system will run, as your video card labors to draw and redraw all those colors and patterns. To turn off your system's wallpaper, go into Windows' Control Panel and double-click on the Desktop icon. Under the section for Wallpaper, select None, and save the changes. You can also go into the Control Panel's Colors section and eliminate crosshatches or other complex colors and patterns cluttering your work area, because these can slow you down as well.



The multimedia Performa has a color monitor, a CD-ROM drive, built-in speakers and a fax/modem. You'll find you also have all the software necessary to run a household, teach your kids or work at home.

Back in the old days, before computers roamed the earth, people used to learn things by reading words on a page.

But then, that was before ideas came to life, squawking and swooping and flapping their way off computer screens and into your imagination.

Welcome to multimedia for Macintosh.®

What is multimedia, anyway?

Multimedia computing brings together different types of media: text, illustration, photos, sounds, animation, speech and video. And with an Apple® Macintosh Performa,® it's easy. Just pop a multimedia CD-ROM into the computer.

Take any number of dinosaur CDs. You can read all about pterodactyls, then hit a video button and zoom in for a closer look. Watch a paleontologist talk about the flying lizard. Or go listen to the *T. rex* roar again.

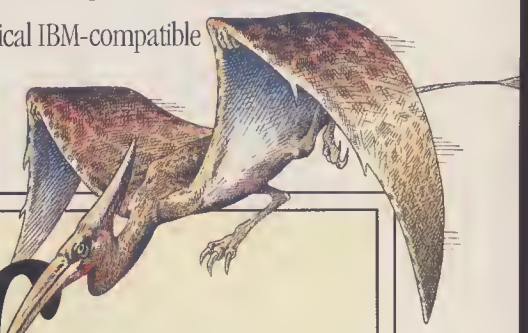
Instead of dry text, you get an eyeful. And an earful. And eventually, a mind full.

New ideas are continually reinforced, and interactive controls let you go at your own pace. So kids learn faster and retain more. (Maybe that's why more schools use Apple computers than any other kind.)

Why is Macintosh better?

As Walter Mossberg noted in *The Wall Street Journal* on January 13, 1994, "Getting multimedia hardware and, especially, software to run on a typical IBM-compatible computer can be a frustrating—even impossible—task....In general, users of Apple's Macintosh computers face very few of these problems, because a single company—Apple...has made sound, graphics and video a priority."*

In other words, Performa makes multimedia easy—as easy as using a Mac.® So capture one, and discover a world of sight, sound and power. The power to be your best.®



If a computer stimulates your eyes and ears, can your mind be far behind?

Performa®

The Family Macintosh

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and image quality. Interference can also scramble the data on floppy disks, tapes, hard drives, and other types of magnetic media.

To solve the problem, first try moving the speakers farther away from your monitor (and from each other). If the cables don't reach very far, you can purchase longer speaker cords from any computer store or Radio Shack for less than $10. If you can't solve the interference problem by repositioning the speakers, consider replacing them with slightly higher-quality models that are magnetically shielded. Yamaha's YST-M10s ($149), Sony's SRS-PC20s ($40), and the AppleDesign Powered Speakers ($79) are three good options to consider.

One final note: though some people recommend wrapping your monitor in tinfoil to shield it from interference, this is a temporary fix at best — and a dangerous one. Any kind of wrapping on a monitor can block its air vents and lead to overheating. We don't recommend it.

Move Program Directories Safely

Q. *While reorganizing files with File Manager, I moved a Windows game (TuneLand) into a new directory I created, called KIDGAMES. Now when I try to launch TuneLand from Program Manager, I get an error message that says "Application Execution Error." Is there any easy way to solve this problem without reinstalling the game?*

A. Whenever you move files to new directories or rename program directories on your hard drive, you have to edit the information you provided Windows regarding the Program items that you moved. Here's the simplest way to do this. Go into Program Manager and highlight (one mouse click, not two) the icon for the game or program you've moved. Now mouse over to Program Manager's File menu and click on Properties. This brings up a dialog window called Program Item Properties.

The first line, Description, contains the name that appears under the program icon. The next entry, Command Line, contains the path and filename for the program. If you've changed the directory that holds the program files, this line will now be pointing to the wrong location on your hard drive. If you know the new location, simply type in the program's new directory and subdirectory.

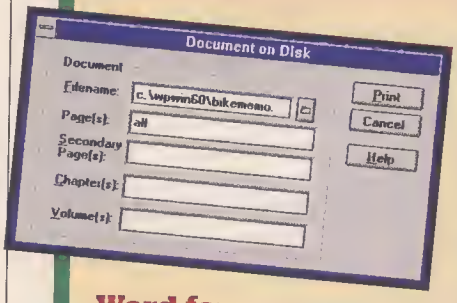
If you can't remember the exact directory name, move your cursor to the Command Line and click the button called Browse; this lets you browse for the directory and program file with your mouse, as you would in File Manager. When you find the proper file, highlight it with your mouse and click on OK; this brings you back to the Program Item Properties window. The new program directory and filename should now appear on the Command Line. Now move your cursor down to the next line, called Working Directory; you'll need to type the new directory name on this line as well. Click on OK to close the Program Item window, and try running the program. It should load without a hitch.

Shortcuts

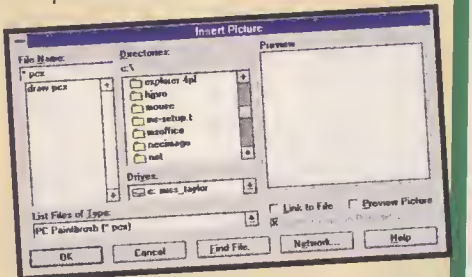
Try out these quicker ways of getting things done; you may prefer them to your usual methods

Microsoft Excel Shortcut: Do you prefer to select rows and columns from the keyboard rather than by using the mouse? Place the cursor anywhere within the column you want to select and press Ctrl-space. To select a row, position the cursor anywhere on the row and press Shift-space.

WordPerfect for Windows Shortcut: Did you know that you don't have to open a document to print it? Simply click on the Print dialog box and select Document on Disk. Enter the filename, click on OK, and then return to the document you were working on...sans interruption.



Word for Windows Shortcut: When you load a document with lots of graphics, scrolling through it can take forever. To speed things up, turn off the graphics cache. Click on Insert, Picture, and then turn off Save Picture in Document Option. The pictures will be replaced with big Xs, but you'll be able to shuttle through straight text quickly. When you need to view the pictures again, simply turn on the Save Picture in Document Option.



Windows Shortcut: Looking for a quick way to maximize a document or application to full-screen view in Windows? You can use the triangles in the upper-right corner of the document or program window, but here's an even easier target: double-click on the title bar and watch it go to full-screen.

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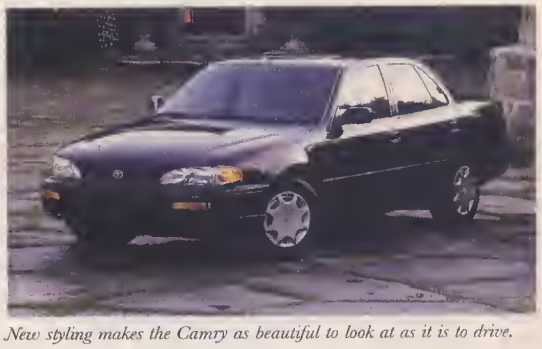

New styling makes the Camry as beautiful to look at as it is to drive.

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©1994 Toyota Motor Sales, U.S.A., Inc. Buckle Up! Do it for those who love you. *Camry XLE V6/Best car built in America. *Automobile Magazine*, March 1993. **To help avoid serious injury, always wear your seatbelt. Driver and front-passenger air bags are a supplemental restraint only. †Manufacturer's suggested retail price w/o freight for DX 5-speed. Actual dealer price may vary. Camry XLE V6 shown with optional equipment. ††J.D. Power and Associates 1993 and 1994 New Car and Light Truck Initial Quality Studies.℠ 1994 study based on a total of 44,016 consumer responses indicating owner-reported problems during the first 90 days of ownership. Most Camrys are built in America.

HELP!

Care and Feeding Of Your Entire System

Strategies for helping your family computer survive thunderstorms, blackouts, and other natural disasters

DAY AFTER DAY, our computer systems boot cheerfully to life when we turn them on. These basic maintenance tips can prolong the life of your computer — and your data — for years to come, through thunderstorms, power brownouts and blackouts, and temperature and humidity changes.

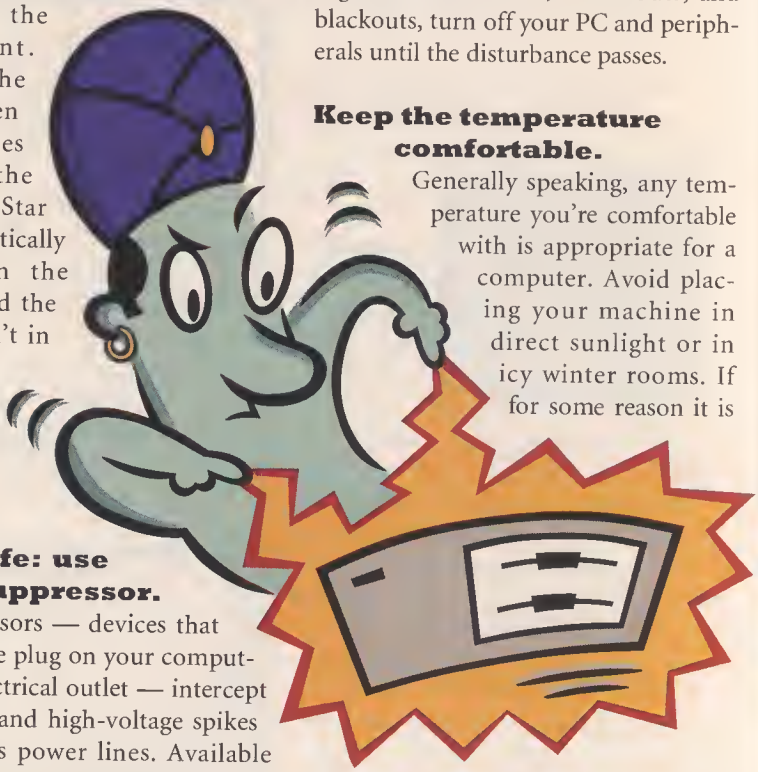
Keep it grounded.
Plug power cords for your computer and its components into only three-pronged outlets to ensure that any excess electrical charge in the power lines has somewhere to drain.

When choosing an outlet for your PC, keep in mind that PCs and laser printers are power hogs. If possible, choose an outlet that isn't on the same circuit as another power-hogging device (such as a refrigerator, washing machine, or hair dryer); the power fluctuations that occur as power hogs turn on and off can result in your PC shutting down suddenly and losing unsaved work. You might also consider having an electrician install an outlet on a separate circuit, if other available outlets are giving you trouble.

Turn off your computer (and any peripherals) before connecting or disconnecting cables or adding any component. Plugging a keyboard, monitor, or CD-ROM drive into your system while electricity is flowing can seriously damage both your system and the peripheral.

Turn it off — sometimes.
The subject of whether it's better to turn your computer off or leave it on overnight has been hotly debated for years. One camp holds that turning it off and on subjects the components to unnecessary wear and tear. Others contend that it's safer to turn systems off when they're not in use.

The bottom line? The jury is still out. There's no evidence to suggest that turning off your PC every night shortens its life, but there is evidence that it cuts your electric bills and is easier on the environment. Many of the newest "green PCs," the ones that carry the EPA Energy Star logo, automatically detect when the processor and the monitor aren't in use and send themselves into a low-power sleep mode.



Play it safe: use a surge suppressor.
Surge suppressors — devices that sit between the plug on your computer and the electrical outlet — intercept power surges and high-voltage spikes coming across power lines. Available for less than $80, they're sensible insurance against most electrical disasters. Universal power supplies (UPSes), which supply battery power to your computer during power outages, also act as surge suppressors.

When choosing a surge suppressor, look for one that meets the UL 1449 standard and is rated at 330 volts so it will adequately protect your system. Many devices that look like surge suppressors are merely power strips that offer no surge protection whatever. One surge suppressor that meets these standards and has been rated as a *Consumer Reports* Best Buy is the $50 Terminator TR6 from Tripp Lite (312-755-5401).

While surge suppressors are good insurance, they're not foolproof. During electrical storms, brownouts, and blackouts, turn off your PC and peripherals until the disturbance passes.

Keep the temperature comfortable.
Generally speaking, any temperature you're comfortable with is appropriate for a computer. Avoid placing your machine in direct sunlight or in icy winter rooms. If for some reason it is exposed to extreme heat or cold, bring it back to a comfortable room temperature before turning it on. Like people, computers also dislike humidity. Keep them away from excessive moisture, such as a window that collects condensation or steam sources.

Give it lots of fresh air.
The whirring noise you hear when you turn on your computer each day is its

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fan drawing air through the chassis. This flow of air prevents your PC from overheating. To keep your PC breathing, make sure the air vents on its back, front, or sides are at least a foot away from walls and other large objects. Also, wipe the vents free of dust, lint, and other debris every few weeks to keep the air flowing smoothly. Once a year or so, you may also want to open up the chassis and use a can of compressed air to blow out the dust and other detritus that have accumulated inside, since these can block circulation.

Beware of static.
Whether you're handling disks or opening the case on your PC, static can be the touch of death for your PC's more delicate components. Avoid static buildup by touching a piece of metal before handling floppy disks or opening the case on your system.

Keep it clean.
All electrical devices are magnets for dust, and computers are no exception. Use a damp, soft, lint-free cloth to clean off the dirt, grime, and dust that build up on the computer's exterior. Avoid aerosols, solvents, or abrasives; these can discolor or damage the finish on your system.

You should also avoid getting moisture in any of your computer's openings — it may damage the system's internal components. To clean the monitor, put a tiny amount of glass cleaner such as Windex on a soft cloth and wipe the screen. Don't spray the cleaner directly on the monitor — the spray might seep into the monitor and damage its innards.

HELP!

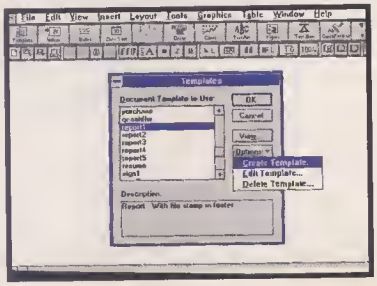
Buried Treasure: Inside Word Processors

How to find and use the hidden tools for creating tables, drawings, and dozens of dynamite forms — from fax cover sheets to résumés

Today's word processors teem with little-known features that can help present your words in organized, concise, and elegant ways. Here are three key tools for better-looking documents: templates, tables, and drawing modules.

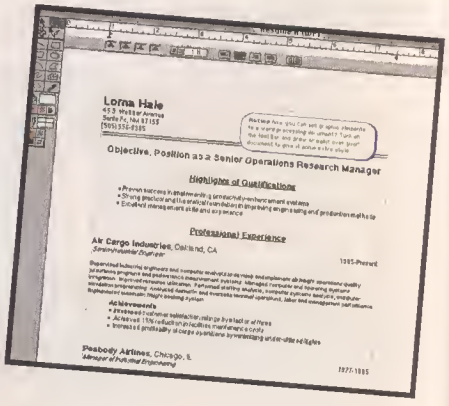
Templates and Forms

Templates or forms can reduce the drudgery of creating beautiful documents. Design your own stationery with borders, fonts, and letterhead, save it as a template, and automatically invoke it every time you write a letter. The same applies to fax cover sheets, phone messages, invitations — even your own newsletters.



Word 6.0 for the Mac or Windows comes with dozens of templates for everything from fax cover sheets to invoices to term papers. Select File, New, then Template in the New box. Choose a preselected template, or click on Normal (the default) to create your own; then click on OK. Now begin designing. When you're satisfied, click on File, Save As. Give the template a name, click on Type, and select Document Template; click on OK. To invoke the template, simply click on File, New; scroll through the list of templates until you find it; double-click on it.

WordPerfect for Windows comes with an even larger selection of templates, including everything from slide shows to party invitations. Click on File, Template. Then select Options and Create Template. Give the template a name; then tab to the Description window and briefly describe what it will be used for. Click on OK, and the Template tool bar will appear. Design away. When you are finished, click on Exit Template. WordPerfect will return you to the document windows.



Microsoft Works for Macintosh and Works for Windows organize their templates into three categories: Business, Home and Activities, and Education. Three popular ones include Client Time Sheet (Business), Grade Book (Education), and Personal Financial Statement (Home and Activities). To create templates in either program, simply design them as you would any document and then save them as templates. In Works for Mac, click on File, then Save As. The program asks which format you want to save the document

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{ The next best thing to having a kid around. }

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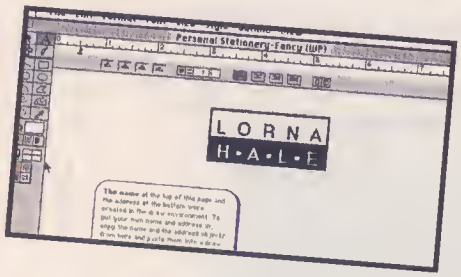
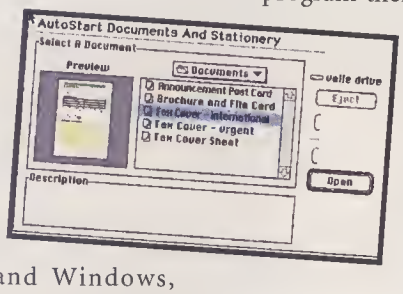


as. Save it as Stationery (it's the first choice). In Works for Windows, click on File, then Save; then click on the button called Template.

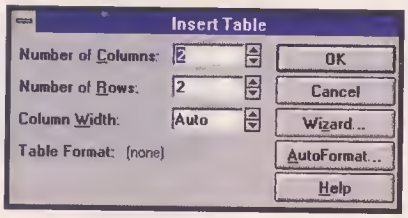
ClarisWorks comes with several predefined templates for personal stationery and a fax cover sheet, among others. To create your own, simply design it as you would any document; then click on File, Save As, and then ClarisWorks Stationery. Give it a name and save it.



Tables

Most word processors let you create tables within documents. Word 6.0 for Mac and Windows, ClarisWorks 3.0, Microsoft Works 3.0 for Windows and 4.0 for Macintosh, and WordPerfect 6.0 for Windows even provide table features that automatically adjust alignment as your tables grow or shrink.

In any of these word processors, simply place the cursor where you want your table to start. In Microsoft Word, click on Table, then Insert (Insert, then Table on Macs). Word will prompt you for the number of columns and rows you want. Don't worry about being exact; you can add and delete columns and rows as needed later. Below the row/column prompt, you'll find a Column Width option. The default is Auto, which will expand each cell according to the amount of information you enter and your page margins — an excellent choice if you're unsure how much information you'll need to enter. The table provides word wrap within each cell, expanding the cell's size as needed.



In WordPerfect for Windows, click on Table, Create. From the menu, select the number of columns and rows (again, you can add or delete them later). Cell size automatically adjusts according to the amount of data you enter.

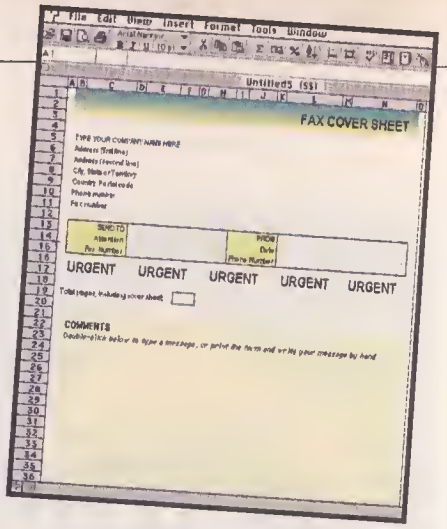
With Microsoft Works 4.0 for Macintosh, you can build tables by clicking on the Table button in the floating tool palette. Hold down the left mouse button and draw the space you want the table to occupy within your document; release the button when the space is the correct size. Alternatively, you can click on Insert, then Table, from the menu bar. A dialog box will ask you the number of columns and rows you want. In Microsoft Works 3.0 for Windows, click on Insert, then Spreadsheet/Table. The program then asks if you want to create your table using a current spreadsheet. If not, click and drag the table to the size you want, just as with the Mac version.

Tables have always been part of ClarisWorks for Macintosh and Windows. On Macs, click on Show Tools and then on the plus sign right under the arrow in the upper-left corner of the screen. This invokes the spreadsheet module. Draw the size of the table you want by holding the left mouse button down and releasing it when the table is large enough. Now click on Options, Display. Then click on Column and Row headings to get rid of the column and row headings, if you like.

Drawing Tools

Drawing tools ensure that simple diagrams, maps on party invitations, schematics for term papers, customized logos, and other graphics give your documents a polished appearance and relieve the eye of long spans of text. What few people realize is that most full-fledged word processors now also include basic drawing tools.

In Word 6.0 for the Mac or Windows, click on the drawing tools icon (a picture of a triangle, square, and circle). The drawing tool bar will appear across the bottom of the screen. If you're new to drawing tools, click on any of the five leftmost icons; then hold down the left mouse button and begin drawing with your mouse as if it were a stylus. Release the button when you're satisfied with your drawing.



In WordPerfect, move the cursor to where you want the picture to appear. Select Graphics, Draw; drafting tools will line up on the left of the screen. When you're happy with your masterpiece, select File, Exit, and then Yes to save your changes. WordPerfect Draw now returns you to your document with your new drawing inserted in a figure box. You can position and size the box by dragging and clicking with your mouse. Remember to save your document before you quit.

In Microsoft Works for the Mac, you'll find painting and drawing tools on the floating palette. These include shapes, paintbrushes, and colors. The main menu (under Tools) has effects like rotate, crop, brightness, emboss, and grayscale. In Works 3.0 for Windows, click on Insert, then Drawing. Microsoft Draw pops up with its own menu; when you close that screen, it updates the image in your document. Otherwise, you can click on the tool-bar button. Remember that you can access the clip-art gallery by clicking on Insert and then Clipart.

In ClarisWorks for both Macintosh and Windows, click on View, Show Tools; graphics tools will appear on the left. Design away. FPC

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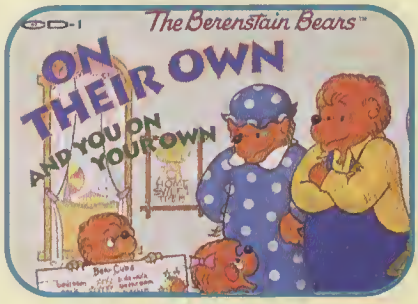

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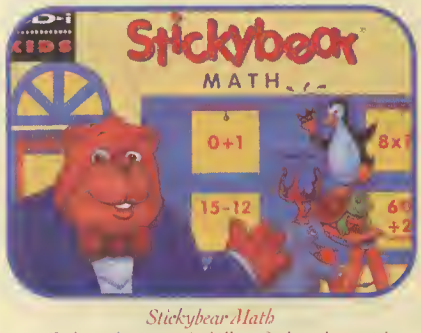

Stickybear Math
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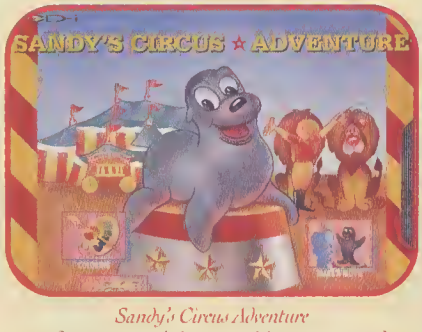

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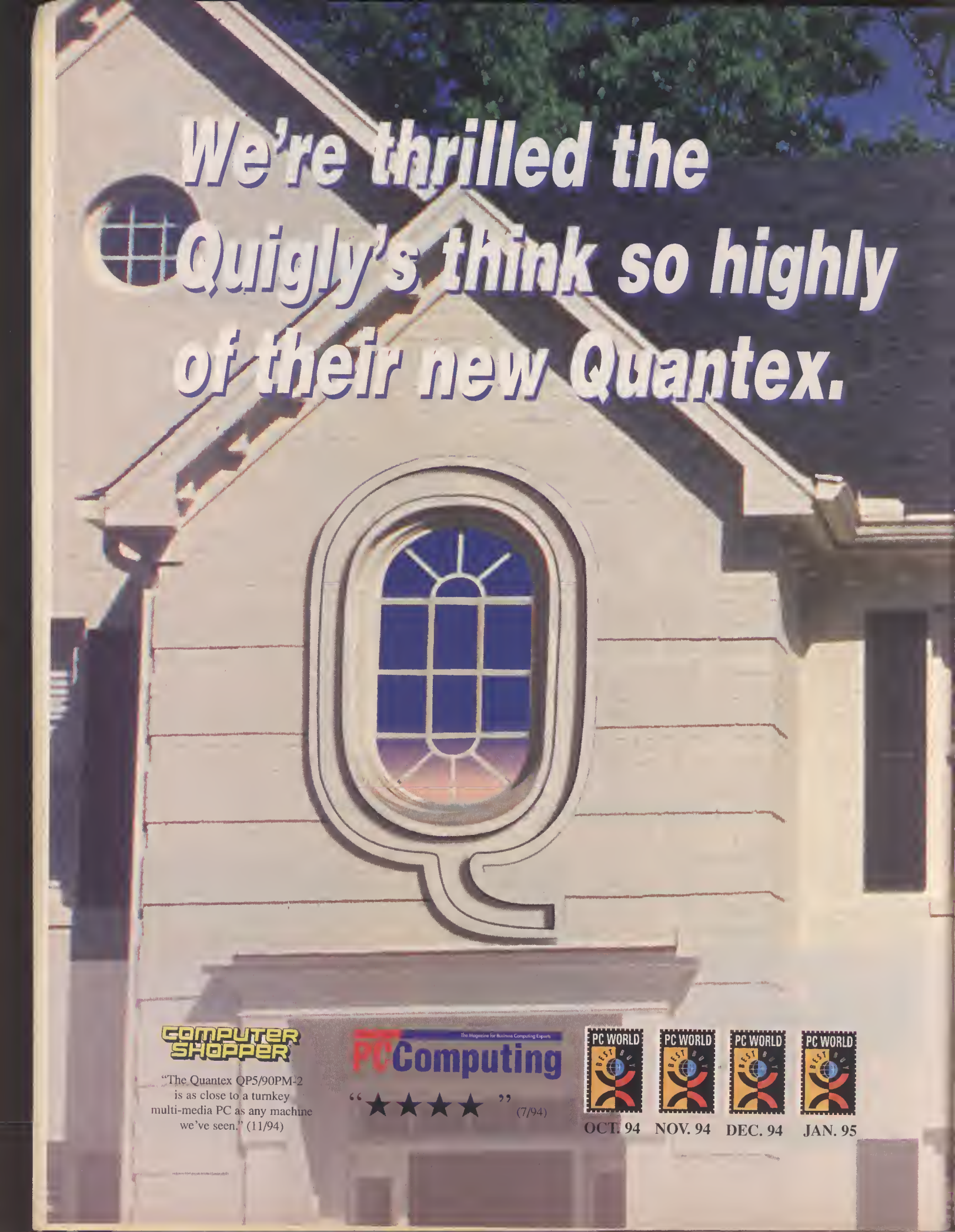
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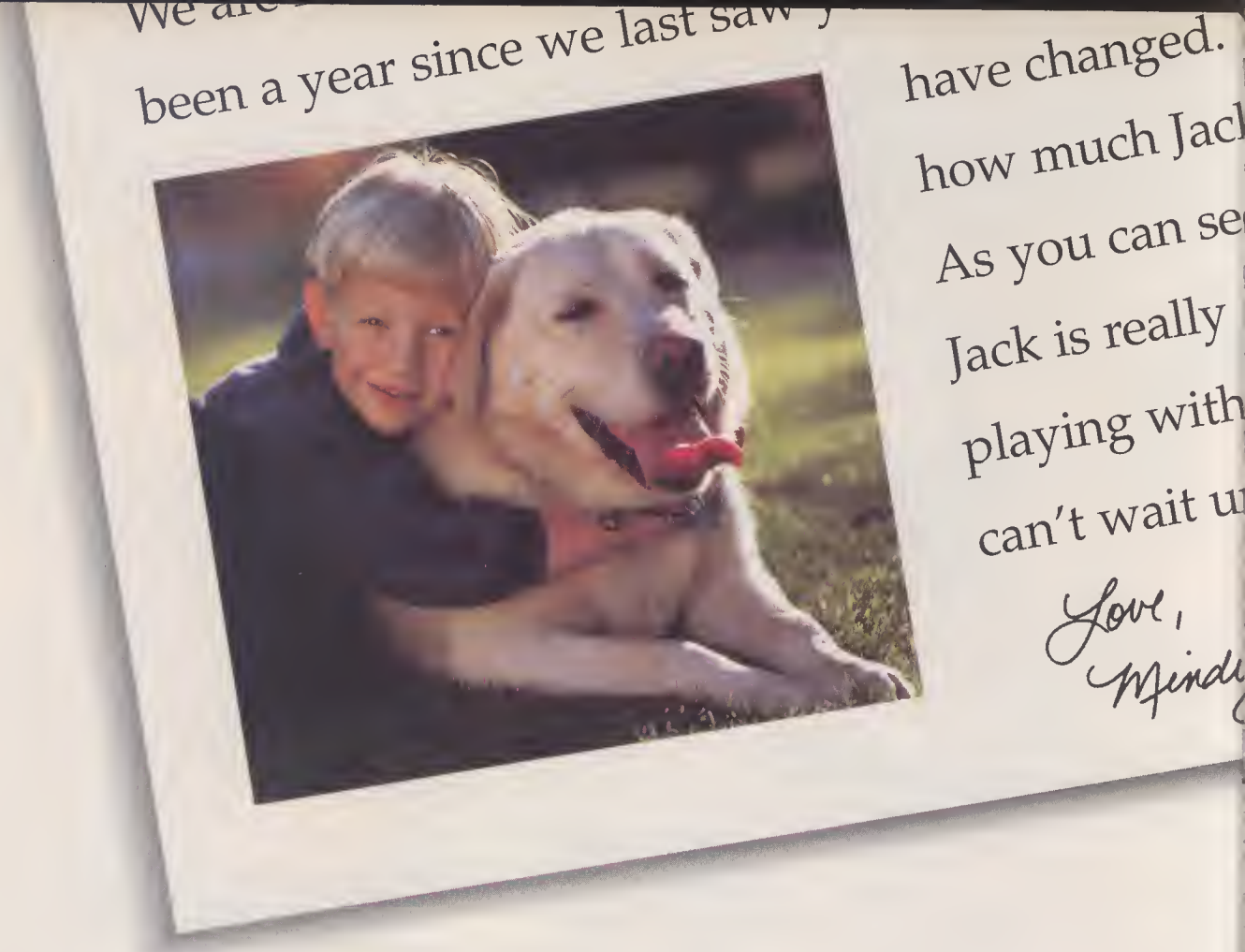

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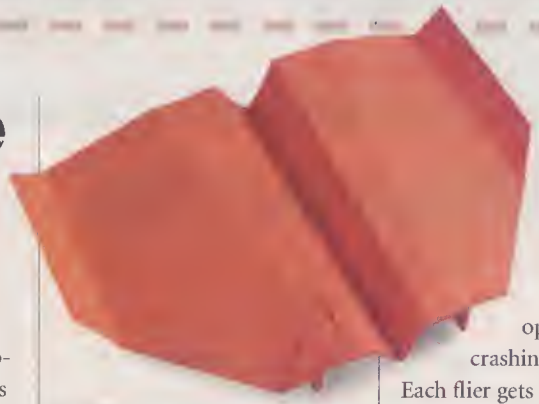


REMEMBER HOW much fun you used to have creating and flying paper airplanes with your friends? Now you and your child can enjoy the same experience even more, using your computer and specialized software to make the gliders. Your computer can lend a level of precise and consistent design not possible when you make the planes completely by hand.

While a paint program will let you customize any plane with art and lettering, new, specialized software lets you not just decorate, but actually create dozens of different planes from predesigned templates. The Greatest Paper Airplanes (KittyHawk Software, 800-777-5745; Windows, $39.95) features designs from simple darts to elaborate jets. All you do is add features like letters, stars, and stripes; the program will print out your squadron, complete with fold lines. WordPerfect's Paper Planes (800-451-5151; Windows and Mac CD-ROM, $29.95) is another great airplane-making program.

Once your planes are off the assembly line, host your own paper airplane show. Here's how.

Stunt Pilot Use your family computer to make flawless gliders that can loop, bank, and soar.

Perfect Landing

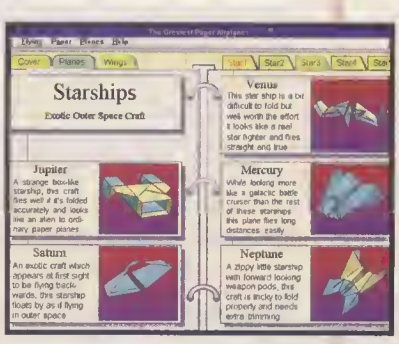
Take long sections of thick string or clothesline and make four concentric circles on the floor (the first 3 feet across; the rest a foot larger than the previous one). In the center of the smallest circle, place a small trash barrel. Make the outer ring worth ten points, the next ring twenty, the next thirty, then forty, and make the barrel or bull's-eye worth fifty points.

Next, plug in a fan, put it on high speed, and aim it at your target. Facing the current from the opposite side of the circle, stand or kneel about 10 feet from the biggest circle and launch your plane at the bull's-eye. Score points according to where the nose of your craft rests. Have each flyer take three turns and use her best score.

Barnstormer and Stunt Pilot

Test your flying nerve by seeing who can fly under a make-believe bridge or barn-door opening created by placing a board or yardstick on two stacks of books on a table. Have your barnstormers stand 10 feet from the table and attempt to fly their planes through the opening without crashing into the books. Each flier gets three chances. Just landing on the table earns a pilot thirty points. Successfully clearing the opening is worth fifty points.

For the finale, have your budding aviators pretend they are stunt pilots. Their task: to fly through enemy fire — Nerf balls tossed between two friends. Have the ball throwers stand 10 feet from the pilot. The pilot must fly his plane between them without getting shot down. Successful pilots are awarded fifty points; unsuccessful ones must find a new line of work.



Paper Chase Make your own fleet of planes with these programs.

Hot Air Ride thermal drafts and keep your paper plane aloft.

Gliderama

This game lets you ride thermals to your heart's content

YOU MIGHT THINK that a computer game about paper airplanes is boring. Think again. Glider Pro (Macintosh and Windows disk, $49.95; 800-359-4920) is one of the easiest games to learn and most challenging to play. It's also one of the least violent, especially in a two-player mode, which requires a cooperative rather than a competitive spirit.

In Glider, you are a paper airplane attempting to catch thermal airlifts throughout houses and surrounding grounds. The object of the main game (played in a setting called Slumberland) is to find six stars before your paper plane is permanently grounded.

Making the journey more treacherous are a variety of obstacles, from candles that can bring you down in flames to paper shredders that leave you in pieces. There are a number of other obstacles, from shelves and cupboards to electric sockets and aggressive, jumping goldfish.

Luckily, along the way are friendly tools. Grease gives you the ability to slide over flat surfaces such as tabletops; elastic bands let you shoot down enemy balloons, spinners, and paper airplanes; and batteries give you a turbo boost when you need to jump out of tough jams. Unfortunately, the "prizes," as they are called, last for only a limited time, so you have to use them sparingly.

Within Slumberland are three houses, packed with more than 400 rooms of challenges, and various other settings, such as a graveyard and a tree house. What's the best strategy for making it through in one piece? Try to exit each room with as much altitude as possible. Look for all invisible thermal drafts when flying outside. Look for bonus prizes in each room, and never let one pass you by unless it's an obvious trick. (Some prizes are in places you can't escape from.) Finally, don't leave a building until you've checked each room for a star; nothing's worse than finally making it to the end and realizing you don't have all six stars.

Perhaps Glider's best aspect is the two-player mode. Here, you fly through the house with a friend (another paper plane). Cooperation is key. For example, it's handy to have one plane shut off the switch to a psycho toaster while the other goes after bonus points which are shared by both players.

The only tricky part of two-person play is ascending and descending in buildings or changing rooms in unison. Just keep both of your gliders pointed in the same direction.

For those eager to create their own gliding challenges, there is an empty house you can fill with hazards, prizes, and other household clutter that you can combine into a neverending jetstream of flight challenges. Guaranteed: this game will leave you soaring for quite some time.

Aviation Super Software

If you're looking for a program that combines the game Glider, a paper airplane module, a Corsair flight simulator, and piles of reference material on flight, then get a copy of Knowledge Adventure's Aviation Adventure (Windows, $50 street; 800-542-4240). This product is a CD-ROM packed with everything from blooper landings to detailed illustrations of Soviet fighter jets (you can actually zoom in to details of the jet under the plane's skin).

X-Ray Eyes See beneath the skin of a plane with Aviation Adventure.

Microsoft's Flight Simulator (800-426-9400; Macintosh disk, version 4.0, and DOS disk, version 5.0, $49.95) has long been the standard for flight simulation. And if you enjoy nonmotorized flight, try soaring in the sailplanes packaged with the program.

The fastest way to get airborne is to open the airplane file, choose the experimental or Schweizer 2-32 sailplane, and select a flight situation from the situation file. Two choices to start with are Ridge Soaring and Thermal Soaring. As you get more confident, try some of the other challenges, such as landing on an aircraft carrier at night. Good luck!

The Right Stuff

Make your games blast off with these advanced accessories

Mario Andretti and Amelia Earhart never competed with shoddy controls, and you shouldn't, either. Whether you're into smoking the field at Indy or blazing under the Golden Gate Bridge in a Learjet, you'll love the feel and play of these specialty game devices.

Driving

Especially with all the racy graphics and customizable options of new computer racing games such as IndyCar Racing, NASCAR Racing (both by Papyrus Design Group), and World Circuit (MicroProse), tapping on a keyboard to take the checkered flag simply doesn't cut it anymore. You get much better control with ThrustMaster's Formula T1 driving wheel ($179.95; 503-639-3200) and pedals or with CH Products' Pro Pedals ($139.95; 800-624-5804 or 619-598-2518). Hugging corners on laps and accelerating are especially more realistic with these devices. And if you run into trouble and skid into a mean three-sixty, don't sweat it; feather the gas pedal and steer through the turn — you'll be back in the race in a flash. (Just try doing that with your directional keys.)

Racing Machine Go from bumper car to IndyCar (right) with the ThrustMaster steering wheel.

Game Gear Special equipment for today's games makes winning a lot easier.

Space Combat

For flight jocks who take X-Wing, Rebel Assault, and Flight Simulator seriously, Flightstick Pro (pictured below) by CH Products (DOS, $99.95; Mac, $129.95; 800-624-5804 or 619-598-2518) gives you more control while blasting through airspace. Besides making your airship more agile, Flightstick Pro's multiprogrammable buttons make battling the bad guys much easier, which is especially necessary if you take on the Death Star.

But where the Flightstick really counts is in the valleys. Any pilot who has careened into the canyon walls in Rebel Assault using clumsy keyboard commands will be impressed by how much easier these maneuvers are with an ergonomic Flightstick Pro clenched in his fist.

Flight Simulation

In Flight Simulator, Virtual Pilot Pro flight yoke (800-624-5804 or 619-598-2518, $129.95), complete with aileron trim controls and throttle, lets you buzz downtown San Francisco (or any other city) with the ease of Superman.

Because it clamps to your desktop, there's a real sense of firmness about it. Push the wheel in and watch the nose drop. Pull back and look for the sky. Turn the wheel hard in one direction and rip through a roll. Want to take it down for a gradual descent? Ease back on the throttle (that looks similar to the ones you find in real planes), and you're home free.

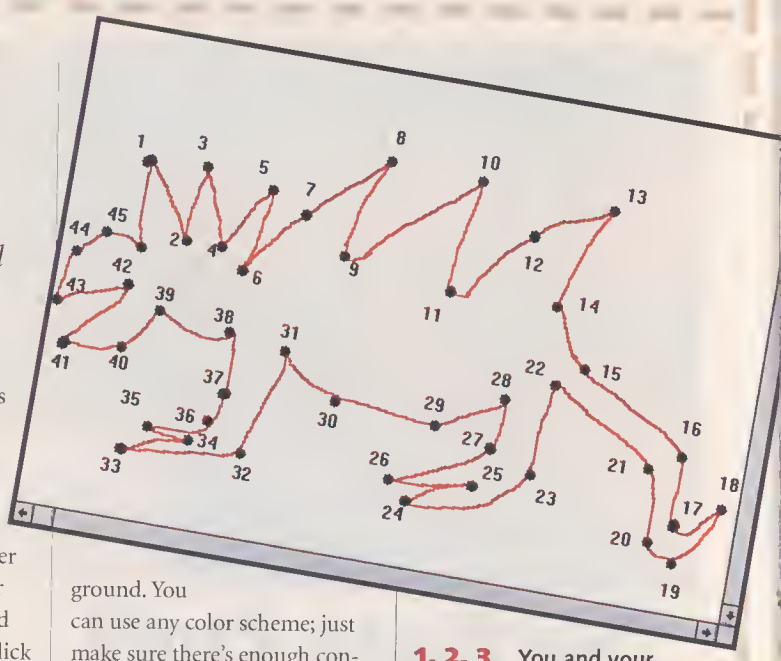
Pull Up, Captain! Flight yokes give flight simulation games a far more realistic feel than joysticks or keyboards.

The flight yoke makes your ship react smoothly, and consequently, your flying ability improves. See if you can pass under the Golden Gate Bridge in your Learjet— upside down.

LIGHTWORKS PHOTOGRAPHIC (4)

Connect the Dots

Make oodles of drawing puzzles for your child



1, 2, 3 **You and your child will love creating and playing with the many different connect-the-dot puzzles you can produce on your family computer.**

PUZZLE BOOKS are great fun, but there's one problem: you're limited to the number of games that appear in their pages. With your computer and a drawing program, you have an unlimited source of puzzles, especially the always-popular connect-the-dot kind.

Creating this type of puzzle is quick and easy. Make a line drawing, with one continuous line, in a color other than black. If you switch drawing tools, be sure to use the same color and not to use any color fills or textures.

Use the pencil tool to place black dots at various intervals and at intersections of lines. (In Paintbrush, double-click on the brush and select the dot shape.) Number the dots or use letters if there are fewer than 27 dots. Select the color you used for the drawing and choose the paint-can tool. Click inside and outside the drawing, and the lines will blend into the background. Choose white from the palette, and click on the screen. You'll have numbered black dots on a white background. You can use any color scheme; just make sure there's enough contrast that the numbers and dots are visible.

To make a connect-the-dots puzzle for a friend using Kid Pix stamps, select a stamp and then the Edit Stamp option. With the color white selected and the pencil tool, erase the middle and edges so just a portion of the boundary remains. Now place your stamp on the screen, enlarging it as you stamp it (in Windows, hold down the Shift and Control keys; on the Mac, hold down the Shift and Option keys). Using the dot-to-dot paintbrush tool, go back and place dots with numbers at each point around your stamp.

In Flying Colors, use the dot option of the paintbrush tool and slide the setting bar to the right. When you draw the outline of your picture, the dots will be spaced far apart so you can go back and number or letter them.

Once your puzzles are ready, save them as separate files so your kids can connect them and color the picture. For noncomputer coloring fun, print out individual puzzles.

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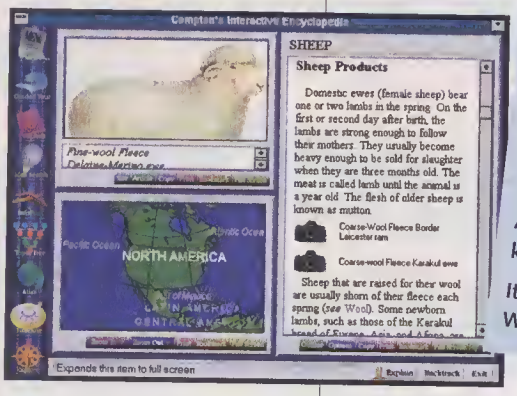
Soft Search With a multimedia encyclopedia, you can make learning an adventure for your kids.

YOUR MULTIMEDIA encyclopedia is a valuable reference tool, but it's also where sound, moving pictures, and interesting facts come together in an often-brilliant display. To let your family enjoy your CD-ROM encyclopedia more, create a scavenger hunt for your kids.

Make a list of questions, perhaps based on a favorite theme, that require your children to search the CD-ROM looking for answers. Each answer they find in their electronic scavenger hunt can then be used to complete a poem or crossword puzzle.

Try this animal scavenger hunt using Compton's Interactive Encyclopedia (version 3.0) or some other CD-ROM encyclopedia. After you get an answer, fill in the correct blank in the poem at right.



1 What is the product made from sheep hair?

2 What popular, fine cloth is woven from the cocoon of a caterpillar?

3 In 1857, famous scientist Louis Pasteur made world history with a special process to purify this substance. (Point your child to the time line for the answer instead of simply looking up Pasteur.)

4 Play the orchestra video. What does a string player use that's made from horsehair?

5 What valuables can be found inside certain Pelecypod mollusks (certain clams, oysters, and mussels)?

6 According to American folklore, this man scared a bear out of a hollow tree by grabbing its tail and shouting wildly at the same time.

7 Another folklore hero from the very same era, Davy Crockett, was said to ride a pet alligator up the waters of Niagara Falls. Though Crockett was later to become a U.S. congressman, perhaps he was best known for wearing this kind of cap.

8 The flag from one North American country, Mexico, has two animals on it. One animal is covered with scales, and the other one is covered with something else. What is the second animal covered with?

9 The most important document Thomas Jefferson ever helped write, the Declaration of Independence, was signed with a _____ pen.

10 Beatrix Potter wrote several award-winning books for children. What animal is featured in her most famous book?

11 What kind of mammoth mammal was Moby Dick?

12 The largest woodpecker living in North America is the _____-billed woodpecker.

13 Which instrument do you hear when you listen to Beethoven's Moonlight Sonata in C Sharp Minor?

From the Animals

A coat of _____(1), a shirt of _____ (2),
A cold refreshing glass of _____(3).
A violinist needs a _____(4).
A string of _____(5) is nice to show.

Back in the days of _____
A hunter's cap was made of _____(6)
A _____ (8) made a fine _____(9) pen.
And _____ (10) feet were lucky then.

Although today we must all strive
to keep endangered friends alive,
Once oil came from _____s (11) at sea.
And _____ (12) topped _____ (13)
keys.

It's important to see today and then,
What animals have given men.

Bag the Big Game

If you're hunting for a mix of fun facts and animal attraction, bag a copy of The Scavenger Hunt Adventure Series: Africa (Scavenger Hunt Adventure Series: Africa by Swede, distributed by Davidson and Associates; Mac, Windows CD-ROM; 800-545-7677; $49.95). Children explore the African countryside collecting photos of animals and matching them to a series of clues. Along the way, animals tell humorous stories about themselves. There are sixteen landscapes in four regions, more than 130 QuickTime animations, two hours of audio and music, and twenty-four puzzles. Clue lists are selected randomly, so kids can go on a different adventure every time they play. Happy hunting (and gathering).

Answers: 1) wool 2) silk 3) milk 4) bow 5) pearls 6) Daniel Boone 7) raccoon or coon 8) feather 9) quill 10) rabbit 11) whale 12) ivory 13) piano

LIGHTWORKS PHOTOGRAPHIC

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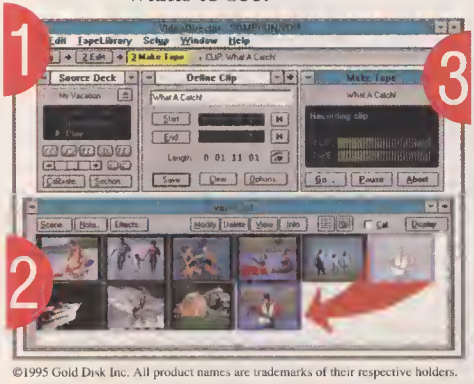

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Arcade Action

Bring some pinball wizardry into your PC

THAT DELICIOUS sound of points ringing up; the flashing lights after a well-placed shot off the flipper; the perfect nudge to get the ball to stay in play. Stimuli only available from the local pinball arcade? Not if you and your family have Crystal Caliburn (StarPlay Productions, 800-203-2503; Windows, $49.95; Mac, $59.95), a great new pinball game that works on your PC.

This realistic game lets as many as four people play, all without the discomforts of a busy arcade. The four players can compete against one another for high score in the traditional pinball format, or they can play individually.

What makes Crystal Caliburn more fun than most on-screen pinball games is that the entire field of play is visible all the time. That means if you're playing more than one ball at a time, the screen does not shift around as the balls bounce all over the playing area.

In fact, multiball play, called *multi battle* in Crystal Caliburn, is one of the most exciting aspects of the game. In multi battle, you must keep two to three balls in play simultaneously. While this can be a real challenge, it also means the possibility of earning quite a few points.

Play in Crystal Caliburn couldn't be simpler: The left flipper is controlled by the *Z* key, and the right by the *L* key. And just as in a real pinball game, double flips can lead to a quick drain, while deflect passes, reverse-pass flips, dead-flipper passes, and holding can let you hit any target you wish.

The Shift key acts as the plunger, and the space bar allows you to nudge the table. Just be careful with the latter — holding down the space bar too long or too often can result in tilting the table. But don't worry, a tilt on Crystal Caliburn results in only the loss of one ball. Besides, there are no real coins to insert in this game, so you can play endlessly. You can also reassign keys if you prefer to use others.

High scorers enter their names just as they do in real arcades: by using the flippers and the space bar. The names are then recorded and shown when the game is idle.

Crystal Caliburn, which is based on the legend of King Arthur and the sword called Caliburn (also known as Excalibur), is loaded with all sorts of bonus spots and ramps, so you'll never have a shortage of targets. Basically, the best strategy is to shoot the lanes and ramps as often as possible and look for the "extra ball," "shield," and "auto battle" whenever they are illuminated. Or you can simply keep your ball in play. Fare thee well.

Flipper Fun Crystal Caliburn features a table full of allies, targets, and bonuses for your playing pleasure.

Pack o' Pinball

For more replay value, pick a pack of pinball games from Epic (800-972-7434; DOS disk, CD-ROM). There are three packs, each containing four tables, for $29 a pack. You can buy two packs for $49 or all three packs for $59. The CD-ROM ($64) includes all three packs plus an additional game. So save your quarters and bank on these tables for the endless sink holes, kickbacks, and multiball plays. With Epic, your arcade is your home.

StarPlay's Star Player

StarPlay Productions offers a contest for Windows and Mac pinball wizards — its HighScore contest. The top ten scorers each month over age 13 and the top three scorers under 13 win T-shirts and have their names and scores posted on America Online and CompuServe. Details for being recognized are listed in the user's manual. Good luck!

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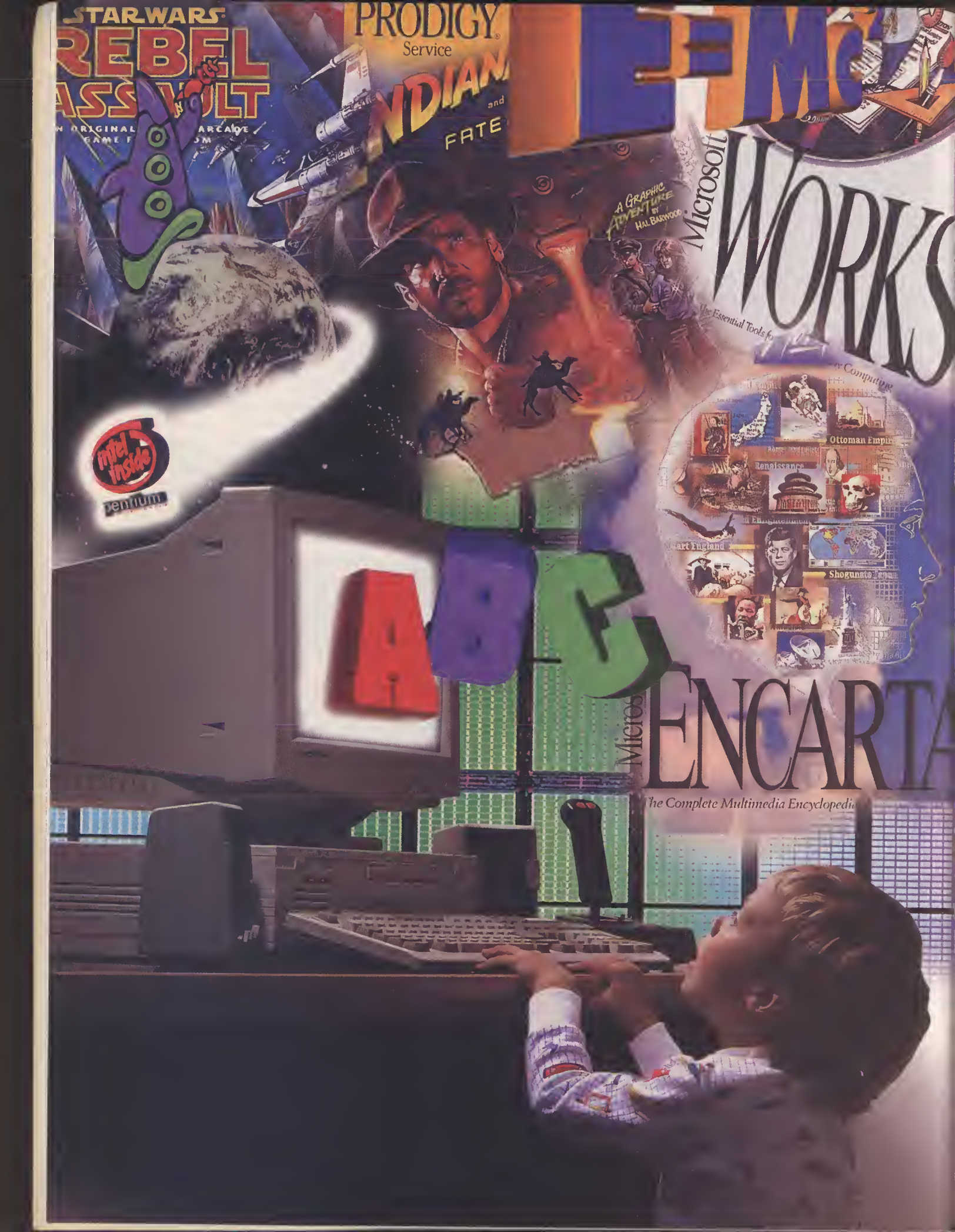
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Games Galore

Multiplayer online games: game-playing fun is just a phone call away

REMEMBER YOUR parents (or yourself) marking the calendar every month, reserving the Wednesday nights for card games with friends? In the 1990s version of poker night, you can use your computer and modem to arrange or log on to ongoing multiplayer online games and join friends or strangers in a challenging game any day of the week.

Most online services and bulletin boards have shareware or freeware single-player games you can download and play on your computer (see "Downloadable Notables" on page 94). Multiplayer games are much different from (and more exciting than) these stand-alone computer games and are available in specialty areas on commercial online services like Genie, Delphi, CompuServe, and The ImagiNation Network. Each service offers a variety of multiplayer games ranging from chess to checkers and backgammon, from air defense to tank combat and strategy puzzlers. If you can log on to a commercial service and navigate the menus, you can join in the fun.

FamilyPC Info

For more information about multiplayer games online, call:

- CompuServe — 800-848-8199
- Delphi — 800-695-4005
- Genie — 800-638-9636
- The ImagiNation Network — 800-462-4461 or 415-548-2500

The first few times you log on to participate in a multiplayer online game, you'll probably play against strangers. But soon you'll be looking forward to a rematch with your new circle of game buddies. Once you're hooked, you can make plans to meet other players — same time, same place, same game. And much like weekly get-togethers at your place, many multiplayer online games allow you to talk while you play, using a built-in chat feature that lets you type messages to your game partners.

One big advantage of multiplayer online games is the freshness of the competition. No matter what your skill level is, playing games against your computer can get tiresome rather quickly. In contrast, there's a certain excitement in knowing that lurking behind that full house, virtual vintage biplane, or on-screen Sherman tank, there's another online gamester. Even playing computer games that let you and another person take turns can't compete with the excitement that comes from engaging competitors from around the country. If your child or you are a real computer gamester, multiplayer online games offer the next level of gaming challenge.

Playing online also has another big advantage — convenience. You can go online whenever time permits and always find a group of willing players. No matter what game you want to play, there is always someone willing to give you a run for your money. Besides making it easy to find gaming partners, multiplayer online games also make it easy for shy or disabled people to participate on an equal basis with everyone else in the virtual, online world.

Online services are not all fun and games. But the way it looks from here, they certainly can be.

Ready, Set, Play

Set up your system for the latest in multiplayer online games

MANY COMMERCIAL online services offer multiplayer games, but the ways they implement them vary widely. Basically, you can find the best in online games on three commercial services — CompuServe, Genie, and ImagiNation.

ImagiNation is strictly a game-playing service and has the widest variety. You don't have to download any special programs to play games on ImagiNation; you simply log on, select a skill level, choose a gaming destination, and deal the cards (as it were). Gaming on ImagiNation adds a personal dimension missing from other multiplayer games: each user on ImagiNation has an online cartoon persona that is displayed to all players in a multiplayer game, so you can see who you're playing against.

In contrast to ImagiNation's get-on-and-go approach, Genie and CompuServe require special game-playing software that you must download for each game you want to play. The cost of downloading multiplayer game software varies. Genie charges its standard hourly connect-time fees for most downloads at 2,400 bps (there's a surcharge for 9,600-bps downloads). The time it takes to download a game depends on its size; a large game like Air Warrior takes about two hours at 2400 bps. CompuServe charges normal connect-time fees; transfer times for multiplayer game files at 9,600 bps range from 65 to 130 minutes.

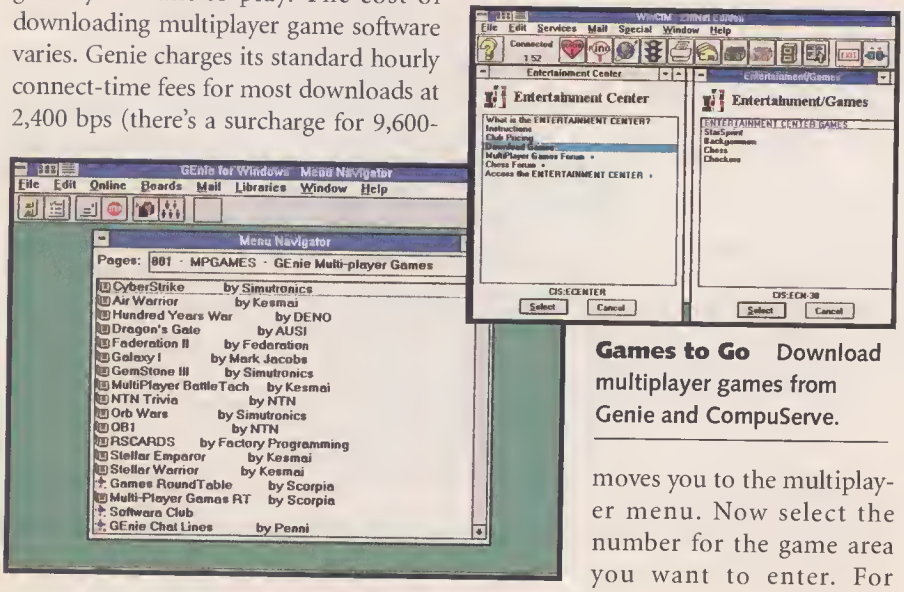
To download the game software for Genie's multiplayer game room, you follow similar steps whether you're using the Aladdin or Windows interface to Genie's features. Aladdin is a DOS-based menuing program that lets you move around the system by selecting numbered commands on each menu screen; the Windows interface lets you click on menu items to navigate the system.

With Aladdin, you log on to Genie and enter `M801` (or `Move 801`), which moves you to the multiplayer menu. Now select the number for the game area you want to enter. For instance, typing 2 takes you to the Air Warrior menu. Then you can choose to download the Air Warrior software for the Color Macintosh or the IBM PC.

Using Genie's Windows interface, you log on and go to the online menu. Choose Move To Page/Keyword. Enter `801`. Click on the Move button. Next, double-click on the Multi-Player Game button and then on the Air Warrior option. Click twice on the first item of the Air Warrior menu (New Player Instructions/Download Starter Kits); Genie will handle transferring the files to your PC.

To download the software for CompuServe's multiplayer games using WinCIM (the graphical Windows Interface to CompuServe), Go `Ecenter`. This takes you to the games area menu. Click on Download Games. Select the game you want; WinCIM will download the program to your hard drive. If you access CompuServe using DOS or Windows and a standard communications program, follow the same steps, but instead of clicking on a menu item, enter the item's number from your keyboard.

Once you have downloaded the files, follow the directions that come with the downloaded game software. After you install the software, launching the game applications automatically dials your modem and logs you directly into the correct game-playing area on the service.



Games to Go Download multiplayer games from Genie and CompuServe.

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Teaching Tools From Teachers

Come On, Try These at Home

From Air Warrior to chess, multiplayer online games really bring home the competition

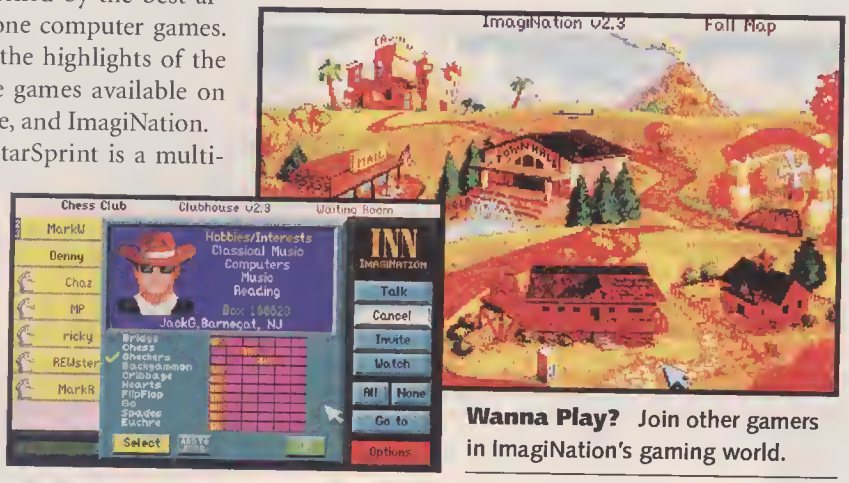
COMBINE THE TEXT and graphics of a computer game with the excitement of unknown competition from around the country, and you have a challenge unmatched by the best arcade and stand-alone computer games. Here are some of the highlights of the multiplayer online games available on CompuServe, Genie, and ImagiNation.

CompuServe's StarSprint is a multiplayer space-combat game with a variety of scenarios and strategies. Test your piloting skills and your luck as a laser gunner on one of three types of ships. The object of the game is to join a team and protect refueling and rearming bases from an invading enemy. You earn points for shooting enemy ships and capturing their bases. If the enemy captures all of your team's bases, the game is over.

If you can't get enough flight stimulation, try to become top gun in Genie's extremely popular Air Warrior game. Air Warrior is a realistic aerial-combat game, so expect intense competition and exciting graphics, animations, and sound effects like those on CD-ROM games. Apprentice Air Warriors can become highly trained in basic flight techniques and learn essential dogfighting and survival techniques by cruising the Air Warrior Libraries for Pilot's Guides and tips. There's even an Air Warrior Online Flying Academy practice area in which you can hone your technique. You can join a squadron or go it alone; fly in recreations of historical air battles, or make a little history of your own.

If you're looking for a more social and sedate online gaming experience, pick from dozens of parlor games available on ImagiNation. From the main menu map (which looks like a small city), click on the Clubhouse. From here, you can select an ongoing game — familiar ones like Hearts, Euchre, Chess, Spades, and Checkers. If you are the cautious type, click on Watch and observe as others play. If you're feeling adventurous, start playing right away by clicking on the Invite button and then a player's picture and asking that person to play. If she accepts, her "picture" appears on-screen, and the board resets for a new game. You can type and read messages to and from your opponents while you play.

Also available are Sierraland, an electronic amusement park equipped with arcade-style games, and Medievaland, where you can find role-playing games.



Wanna Play? Join other gamers in ImagiNation's gaming world.

Delphi Joins the Gaming Craze

Internet provider jumps into multiplayer online games

The newest arrival to the multiplayer online games circuit is Delphi/Internet Services. Delphi now has multiplayer combat and strategy games such as Air Warrior, Harpoon, Island of Kesmai, and Stellar Emperor, as well as more sedate single-player and two-player games.

Some of Delphi's games, such as Stellar Emperor, Island of Kesmai, Air Warrior, and Harpoon, require you to download special software (as on Genie and CompuServe). Other games, like Poker Showdown, Quest, Scrabble, and Stellar Conquest, don't (as on ImagiNation).

From Delphi's main menu, choose Electropolis to get to the gaming area. At the prompt, type `games` and press Enter. You get a list of games identified as single-player (SP), two-player (TP), and multiplayer (MP). To play any of the games, type one of the words in the game title and press Enter. Delphi prompts you to choose from a new list of options, such as getting game software, starting a game, seeing what players are online, writing to a game's creators, entering the game library, or learning about a game.

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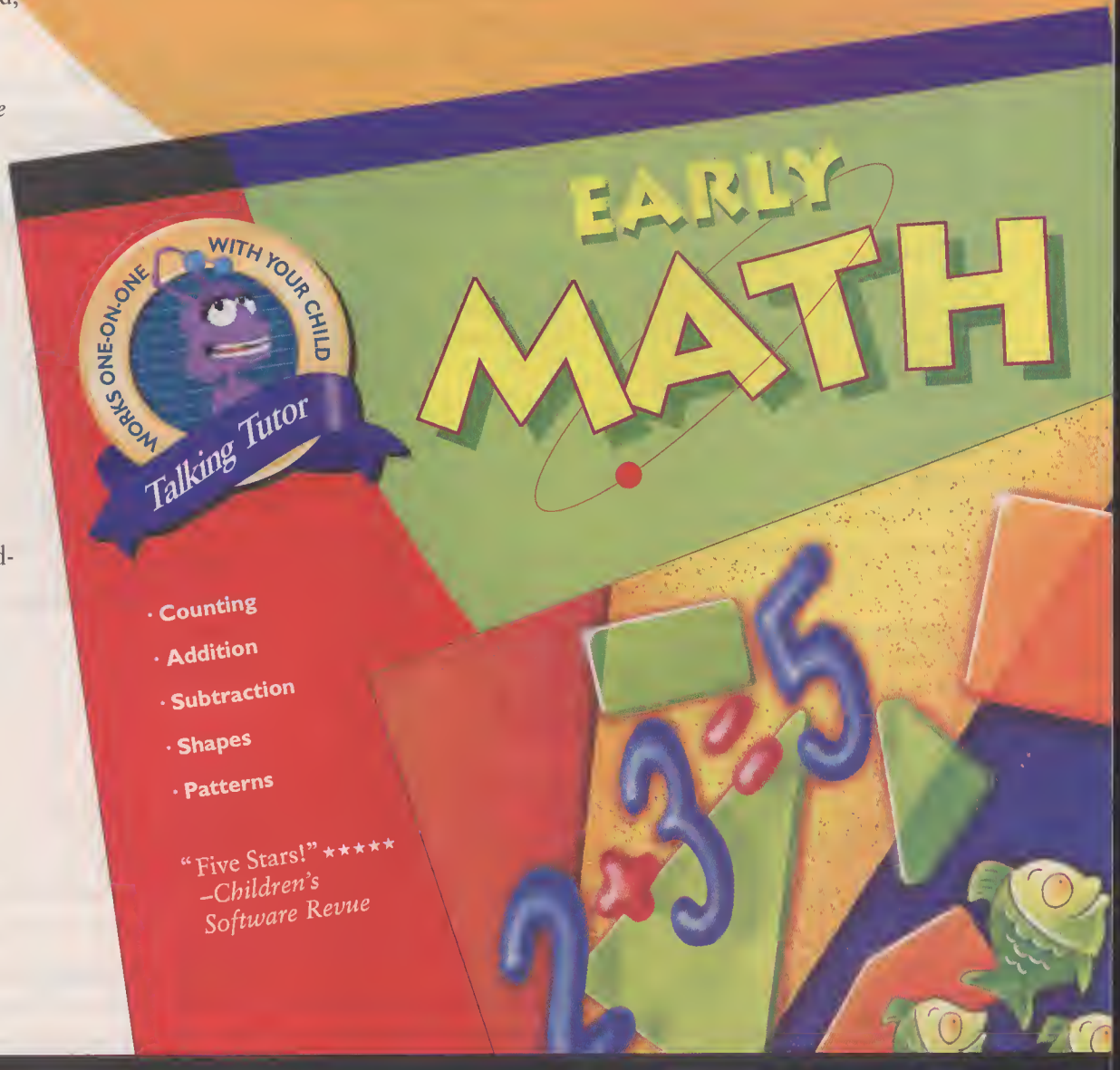

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Downloadable Notables

Top shareware and freeware games for Windows and Macintosh users

COMPUTER GAMING is great, especially when it's cheap. Here's a list of eleven of our favorite downloadable shareware and freeware games. They're in the games libraries of FamilyPC Online on America Online (Keyword FamilyPC), along with dozens of other titles. Stop by if you're in the neighborhood, or make it a point to drop in — it'll be well worth the trip.

Windows Wonders

Entombed 1.5

Fancy yourself an Indiana Jones type? If so, try Entombed, a wild and wonderful adventure and puzzle-solving game where you are an archaeologist exploring an exciting new dig. Shareware, $39.95.

Sokoban 2.2.5 for Windows

Laid-back intellectual types will love Sokoban, a game where it pays to plan your moves carefully. In Sokoban, you move boxes scattered about in several interlocking rooms to a single storage area. The trick is, you'll block your way if you aren't careful, and you won't be able to exit. Freeware.

FamilyPC Online

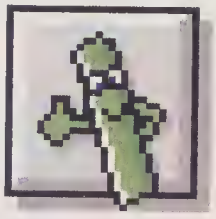
Visit the stacks in FamilyPC Online's Software Library (Keyword FamilyPC) for great games, useful utilities, and the best collection of family shareware and freeware around. If you're not yet on AOL, call 800-719-4600 to sign up.

Literati Lite 1.15 for Windows

If Sokoban is still too busy for you, try out Literati Lite. It's a terrific crossword board game for one or more players that will exercise your gray matter. Literati Lite boasts great background music and some very cool graphics. Shareware, $24.95.

World Empire III 2.0 for Windows

If you prefer war games to word games, check out World Empire III. It's a world-conquest game similar to Risk, with lots of countries to clobber and conquer. Shareware, $29.95.

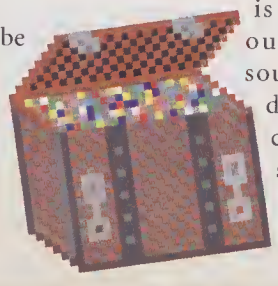


WormWorld for Windows 1.3

If you want a game that combines the logic of Sokoban with a little arcade excitement, take WormWorld for a spin. The object of the game is to guide a cute little worm through an increasingly complicated maze. Players use special blocks to force the critter to move along the desired route. (The game requires that a file called BWCC.DLL be in the System subdirectory of your Windows directory. Obtain that file in the Windows Utilities library on FamilyPC Online or through other services.) Shareware: $10.

Emlith for Windows

No roundup of games would be complete without a Tetris clone. Emlith is one of the best. It's simple to set up and, like the game it's based on, dangerously addictive. Shareware, $10.



Macintosh Mania

Scarab of RA 1.4

Indiana Jones wanna-bes doing their adventuring on the Mac can satisfy their thirst in Scarab of RA. In it, you explore mazes looking for objects that let you complete the game. It's engaging without the extreme violence that characterizes so many games of this genre. Shareware, $10.

Macman Classic Pro 1.0

This Mac version of the classic Pacman arcade game offers another kind of maze mashing. It supports color on color Macs, lets you control speed, sounds, and the number of spare lives you have, and even allows you to play games while in cheat mode. Shareware, $10.

Mines 1.0

If the Minesweeper that ships with every version of Windows has you envious, look no further than Mines — a Mac version of the same game. The Mac version tops Windows by offering very cool sound effects — kaboom. Freeware.

DadaPoet II

DadaPoet II, a literary game of sorts, is a unique way to while away the hours. This HyperCard stack processes text you've copied to the Clipboard and generates a Dada poem by randomly reorganizing your text into lines and stanzas. An odd delight. Shareware; the user decides what amount to pay.

Jewelbox 1.0

Here it is, one of the most stunning Tetris clones we've ever seen. Jewelbox is a gem of a game, with outstanding color and sound. It's so good that a developer has released it commercially, but this shareware version is still available. Shareware, $10.

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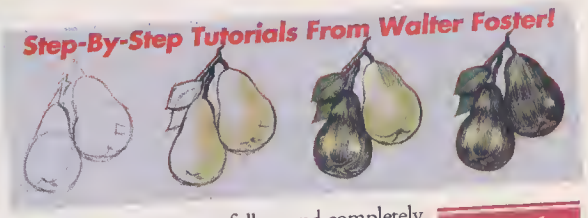

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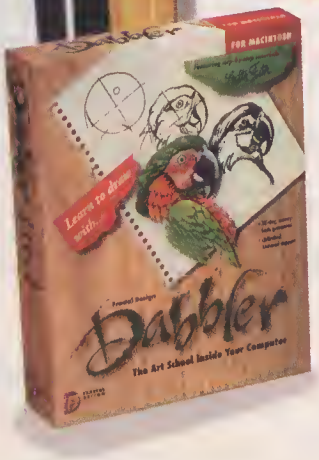

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Postcards From the Net

FamilyPC's Net Nomad reports on comics online, stargazers in cyberspace, and up-to-the-minute, behind-the-scenes news

It's a bird, it's a plane...

...it's me at the Comics/Animation Forum. Meet the people who create your favorite superheroes, villains, and cartoon characters. There's a chat room with such topics as Comic Books, Collecting, Writing and Drawing, and just plain Chatter. Post messages to artists and writers, get the history of your favorite characters, or catch up on old storylines from your favorite comics. If you're into collecting, the Collecting Comics Library is like a comic convention: browse, make offers or trades, and even sell your own stuff.

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Up, up, and away,

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CompuServe: Comics/Animation Forum (Go Comics)

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Better yet, learn all about astrology, from its origins in Mesopotamia around 200 B.C. to today. Choose Maps from the Topics menu to see star maps of the constellations from each month so you can check out how the stars were aligned in the month you were born (I'm a Cancer).

Wishing you good fortunes,

Net Nomad

Prodigy: Horoscope by Jeane Dixon (Jump Horoscope)

What's News?

When I'm out wandering the net, it's easy to lose touch with the real world. But I found that if I drop into the ABC News forum, I can catch hourly headline updates and read the morning economic report and ABC News Poll results. There's also lots of stuff straight from the mouth of *ABC Evening News* anchor Peter Jennings — his daily news journal, his age (fifty-six), and even rare downloadable photos of him in the library.

Also in the library are Clips of the Week (QuickTime movies), clip art, and archives of news information. If I'm feeling particularly newsie, I drop by the Water Cooler (the chat room) and discuss the news with other AOL members, and check out the highlights of ABC news shows like *20/20* and *Nightline*.

If you've got a nose for news, this is the place to be.

Thank you and good night,

Net Nomad

America Online: ABC News (Keyword ABC News)

THE ONLINE world is a vast and exotic expanse of uncharted territory filled with conferences, message centers, forums, chats, and interesting (but unfamiliar) resources. To help blaze the way for your family, *FamilyPC* has dispatched the Net Nomad to wander commercial online networks searching for fun family treasures and cool destinations and regularly send back missives from around the online world. Be assured, if it's online, our Net Nomad has been there. If your family comes across any cool destinations in its own online travels, drop a line via America Online, screen name FPCNomad.

IT'S NOT IF. IT'S WHEN.

486, Pentium, PowerMac...

No matter how fast your PC is, it can't outrun a power problem

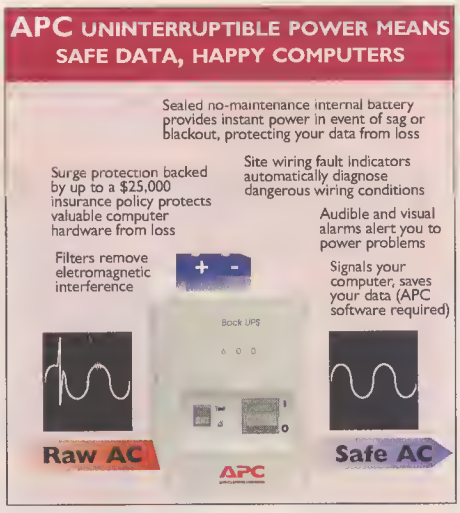
(Get Uninterruptible...starting at $119)

Just don't have the time for power problems on your PC? Don't worry. They'll always make the time for you. It's not if a power problem will occur, but when. Due to household appliances, poor wiring, bad weather or even other office equipment, power problems are as inevitable as death and taxes.

IN THE NEXT THREE MONTHS, MORE THAN 30,000,000 PCs WILL BE HIT BY POWER PROBLEMS...

In fact, you have better odds of winning the lottery than of escaping the sting of power problems on your PC. One study discovered a typical PC is hit over 100 times a month, causing keyboard lockups, hard drive damage, and worse. And since sags and blackouts represent more than 85% of power problems likely to hit your computer, standard surge suppressors are literally powerless to protect you. And a study in a recent *PCWeek* showed that the largest single cause of data loss is bad power, account-

APC UNINTERRUPTIBLE POWER MEANS SAFE DATA, HAPPY COMPUTERS



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Carol Irvine, Wizard Assoc.

"We reduced our maintenance costs the first year by 50% in repairs of equipment."
Valentin Gonzalez, Pfizer

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"Before I purchased the UPS I had to put in at least two hard drives at $1000. With APC products...no new hard drives in two years!"
S. Foreman, LSP

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☐ No! But I would like a FREE Handbook.

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Brands of UPS used? _____ # servers/PCs to be protected? _____

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What's N

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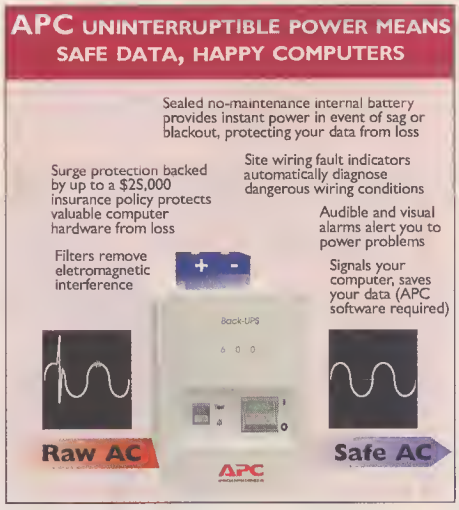

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"Don't take chances...get the ultimate protection... from APC."--PCWorld

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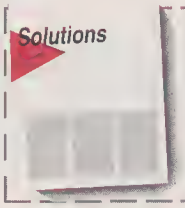

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Who's Online?

Find out who other online service members are and what they're like by using the membership directory

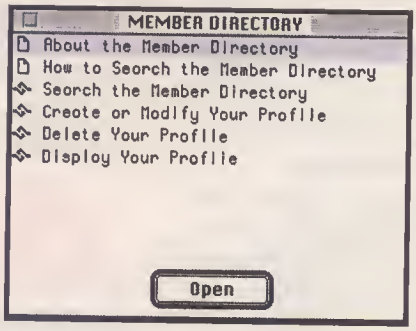
WONDERING who's online? All the major commercial online services have electronic directories that function like an electronic phone book. You can use them to look up friends you already know or folks you don't know yet who may share your interests. Membership directories work slightly differently on each service, but they all serve the same function — they help you find online friends and neighbors.

America Online

To look up a member on America Online, go to the Members menu and choose Member Directory. Here you can search for members by entering screen names, real names, or interests. Remember, on AOL, inclusion in the member directory is optional, so not everyone's screen name or profile will be listed.

To find out if a friend is logged on to AOL while you are, go to the Members Menu and choose Locate a Member Online. This feature will tell you if your friend is logged on and where she is (unless she's in a private room). If a member is online but not in a chat area, AOL will let you know.

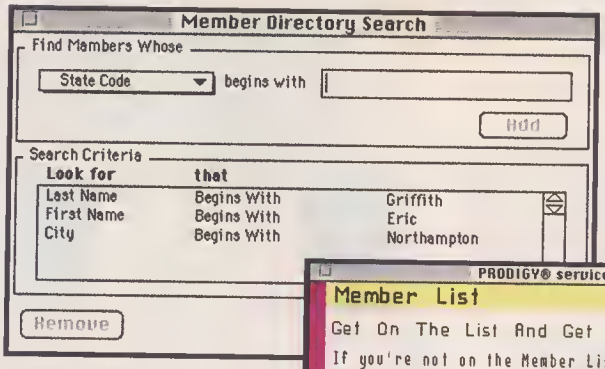
To see a member profile, go to the Members menu, choose Get a Member's Profile, and type in her screen name to get all the information she included in her profile, from real name and hometown to marital status, hobbies, and computer type.

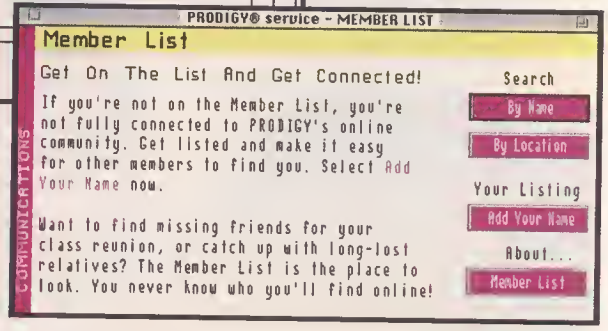


Listed or Unlisted Create your America Online profile and find others in the Member Directory.

CompuServe

The Member Directory (Go Directory) on CompuServe is a similar searchable database of CompuServe users. Narrow your searches by entering any combination of name, city, and state. The more information you enter, the narrower your search. If a search turns up too many members, CompuServe will prompt you for more information.





Knock, Knock Find out who's there using the member directories on CompuServe and Prodigy.

As with AOL, inclusion in CompuServe's Member Directory is voluntary, so it is possible someone you are looking for is unlisted. You, of course, have the option to remain unlisted yourself. In the Member Directory area, you can change your status (listed or unlisted) or alter your profile anytime. Bear in mind that any change you request will take a week to go into effect.

Prodigy

On Prodigy, all users have a seven-character member ID. Jump Member List and you can search Prodigy's Member List by name or location.

The first time you use the Member List, Prodigy will prompt you to add your name to the list. You don't have to; if you don't, other members will not be able to find you unless you give them your online member ID.

If you conduct a search by location (city or state), it can be a bit tricky. Prodigy shows a list of all city names for the selected state exactly as they are entered by members. That means the list includes misspellings and incorrect constructions. So, if you use the search function to find a friend's Prodigy address, you have to search using the exact spelling (or misspelling) the member entered (a search for Ann Arbor will not turn up a member who entered the city as "AnnArbor").

If you do a search using Prodigy's directory feature and get back an unwieldy list, you can scroll through it to find the person you want. And Prodigy gives you the handy option of immediately writing a message to the person you found or adding her to your address book. FPC

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Introducing the True V.34 28,800 bps Sportster Modem from U.S. Robotics.

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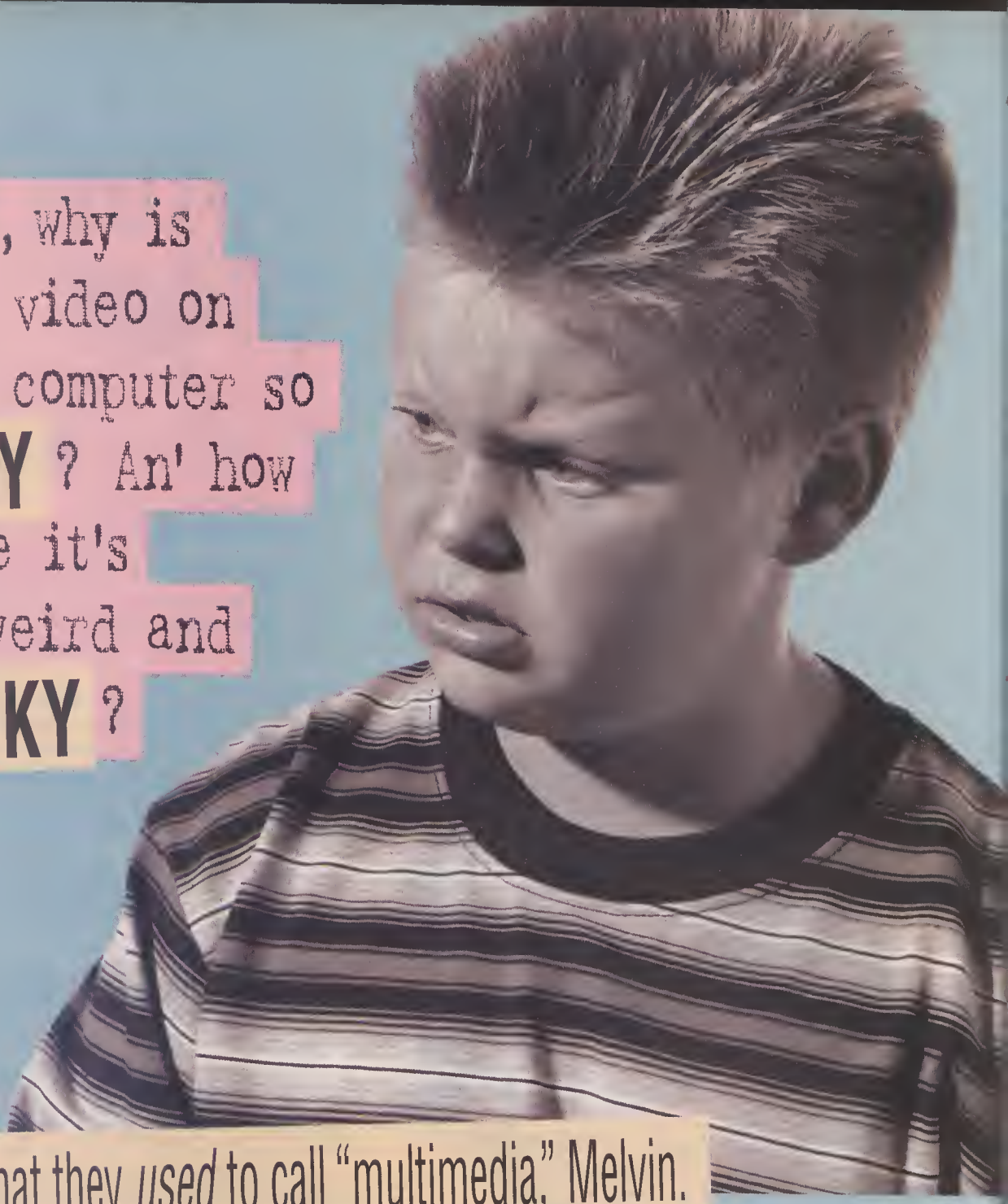
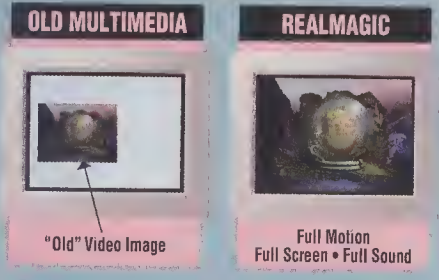


Mom, why is the video on the computer so **TINY**? An' how come it's so weird and **JERKY**?

That's what they *used* to call "multimedia," Melvin.

RealMagic™ is multimedia now! Add the RealMagic card to your system for the incredible realism of smooth screen-filling, full-motion video and 16-bit audio. MPEG is the powerful new digital video and audio standard that puts the "real" in RealMagic.

Enter the exciting new world of interactive MPEG CD-ROMs including movies, games, educational titles, music videos and more. RealMagic is available as an MPEG playback card or a complete multimedia upgrade kit. Anything less is history. Get RealMagic and get real multimedia.



For the store near you or more information on RealMagic, call
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RealMagic is available at:
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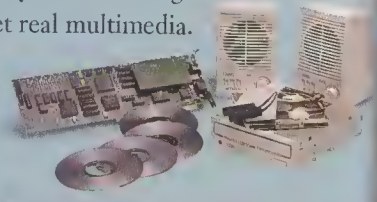

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SIGMA DESIGNS

REALmagic
As Big As It Gets

Dealing with Doom

Parents, prepare to wrestle with where to draw the line on gory games

By Robin Raskin

IT HAS FINALLY HAPPENED. After years of my being the sole authority of what the kids would do on our family computer, the day I've feared has finally come. It hit first when my twelve-year-old daughter visited me at *PC Magazine* and saw shelves of war games, flight simulators, and other macho games. "Why do we only play educational games?" she whined politely. She made me feel as though I'd been holding out on her; I think she recognized that there was a great big computing world out there and I'd only shown her a piece of it.

My eight-year-old son was less genteel when he discovered what he'd been missing. One day last summer, while I attended some meetings, I left him with the people in our magazine's computer labs. By the time I returned, he'd been initiated into the world of Doom — one of the most popular shoot-'em-up computer games. When school reopened in September, he swapped summer experiences with his classmates and reported to us that everyone played shooting games on their Nintendos and Segas. He said he didn't understand why we couldn't at *least* play them on our PC.

My immediate reaction? For the first time in twelve years of computing with kids, I wanted to throw the machines out the window. I quickly saw all my years of patiently cultivating hard-working young computerists vanish. After years of providing my kids with great word-processing and creative arts software, educational games that helped reinforce what was being taught at school, and silly games that provided good, wholesome fun, I couldn't believe that all this careful effort on my part was potentially being sacrificed for mindless gore. How could my little babies want to hoot and holler as blood splattered on-screen?

When my kids demanded to play Doom, I wanted to throw our computer out the window. Still, we ended up allowing it.

Doom, for those of you who have somehow escaped a national computer-game phenomenon (which is on its way to becoming a motion picture as well), is an animated 3-D world where your objective is to save the planet from the clutches of invading aliens by shooting an assortment of monsters and zombies that come at you as you meander through a labyrinth of rooms. As you hit your targets, blood splatters and groans abound.

Doom started out as shareware, which means that you downloaded the software from a bulletin board or passed it along from friend to friend on a disk. If you liked the game and chose to keep it, you sent a fee to the address given in the game's opening screens and the creators sent you a registered copy. The makers of Doom, Id Software, added an incentive to persuade users to send in the fee — the licensed version included two bonus episodes.

To date, more than 130,000 copies of the product have been sold at retail, and the company estimates that there are 13 million shareware copies worldwide. Better still, Doom developers opened up their game's world to other programmers who wanted to create Doom worlds. With innumerable variations floating around (all of them shareware), creating Doom worlds has become something of a pastime. Doom II, Hell on Earth, shipped in time for the 1994 holiday season and is being sold only as a retail product. All of this only serves to show that Doom is something of a cultural phenomenon — one that children want to participate in as much as any other fad.

Illustration by Jeff Seaver

Of course, Doom is not alone; it's a small piece of a huge category of software, which also includes Mortal Kombat, Wolfenstein 3-D, and X-Wing. All these games require quick marksmanship and feature lots of combat. All of them also include some measure of graphic violence, ranging in scope from the fairly benign (X-Wing pits you against the evil empire as you hurl fiery shots across space) to the downright sadistic (Mortal Kombat portrays decapitations).

So what's a poor parent to do? As I see it, my husband and I had three choices. We could forbid these games in our home; we could refuse to buy them. This is certainly the simplest answer. What you don't have, you won't use, and that applies to computer software just as well as to things like liquor, television, and Nintendo. Of course, we'd be running the risk of provoking the kids to flee our house and pass inordinate amounts of time with Doom-owning neighbors. (If Doom were all they owned and played, this choice would be tempting; but who knows what other, worse games might be available at countless friends' houses? We weren't sure we wanted to find out.)

Full of Surprises Younger children may be scared by the quickness with which some monsters appear.

Plan B was to indulge them — buy the game and let them play it to their heart's content, hoping they'd soon get saturated and tire of it. That didn't strike us as a very good solution. Plan C was to purchase the game and set some limits on its use.

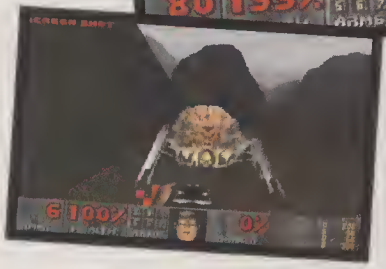
I'll probably hear from many of you expressing your disapproval, and I admit I have some reservations myself, but my husband and I chose plan C — let them play Doom, but not too much. This allows us to monitor the kids' game playing and let

them get their kicks in moderation.

By and large, the plan has been a big success. The kids don't feel like they are completely out of it, and we don't feel out of control or like total bullies. We've also been able to use the Doom debate as a jumping-off point to discuss how we feel about violence everywhere — in movies, in news broadcasts, and in our world.

The way my husband and I see it, the mock and exaggerated killing in Doom is a lot more benign than the footage shown on the six o'clock news and in most PG movies. My kids' reaction to it reminds me quite a bit of my own reaction to shows like "The Three Stooges" when I was their age.

The kids can play Doom for fifteen to twenty minutes (mostly on weekends or just before dinner), and they feel...well, *with it* seems the most accurate way to describe it. And I confess that my husband and I have been known to go a few rounds with them — mostly because we believe that if we play with the kids and know what they're playing, we can better monitor the situation. As a family activity, playing Doom becomes a senseless but harmless diversion. It gives me much the same feeling as tossing a few quarters away at an amusement-park shoot-'em-up: it's not exactly my moment of crowning glory as a parent, but it has its place in our family memories.



Scenes from Doom Ghouls, bearish monsters, and spiderlike robots are among the targets as players try to save the planet.

If your children are still too young to have free and independent access to the shelves at retail stores, consider yourself temporarily lucky. (I'd try to keep that magic alive until the children are at least in second or third grade.) But ultimately, whether it's violence, sex, or foul language, and whether it appears in books, movies, artwork, or computer software, you're going to have to decide whether to forbid, indulge, or strike a middle ground you can live with. And the first step — which you may as well get started on — is to wrestle with where you want to draw the line. FPC

Robin Raskin *is the editor of* PC Magazine, *the author of* Parents, Kids and Computers *(Random House), and the mother of three.*

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CODE: 4005

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Write with Me *uses graphics, text, and sound to bring letters and words to life.*

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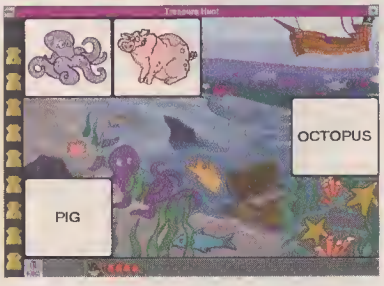

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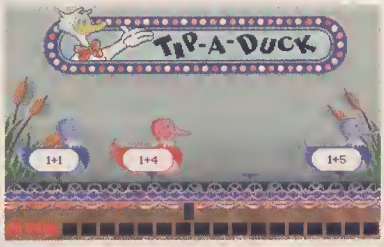

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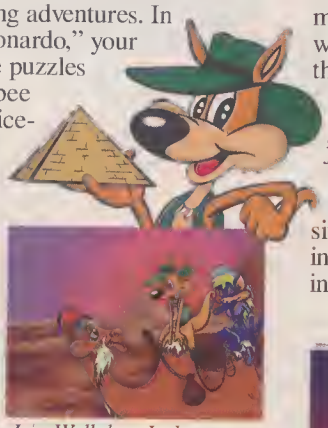

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Family Tested Software

Our network of family testers pick the top dinosaur reference software, instant printing programs, and family adventure games

FINDING GOOD FAMILY SOFTWARE is one of the many challenges you face as a parent. Manufacturers make grand claims and produce dazzling packages — so how do you know what to buy?

If it helps to know what hundreds of families from around the country think, you've come to the right place. FamilyTested software reviews tell you which programs are the best.

Instead of relying on an adult reviewer or a small group of kids to give you buying advice, we turn to a pool of more than 500 families affiliated with FutureKids, the world's largest franchised computer school. We match up software with families that fit the target audience, provide detailed questionnaires, tabulate the results, and report the findings to you.

This issue, we have something for everyone. We examine dinosaur reference guides, instant printing programs, and family adventure games that provide good, clean fun.

Next month, we'll tell you what hundreds of families have to say about desktop publishing programs, anatomy software for kids, math programs for ages eight and up, and a host of other new products.

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Dinosaur Reference

All kids love dinos. Families discover the best programs.

Page 94

Instant Printing Programs

Turn your computer into a publishing powerhouse.

Page 102

Adventure Games

Check here for magical quests that the whole family will enjoy.

SCORING Methodology

FamilyPC relies on the opinions and experiences of more than 500 families to determine FamilyTested software scores. We recruit these families with the help of FutureKids, the largest franchised computer school in the world. On average, twenty families — with children matching the recommended age groups — install, use, and evaluate each software package in their homes using their own computer equipment. Families complete evaluation forms developed by *FamilyPC* editors, who tabulate scores based on these responses. *FamilyPC* collates the scores from the forms to arrive at a score of from 1 to 10 for each category. The categories reflect specific elements of a group of programs.

The scores are weighted in relation to a category's importance to determine a program's overall score. Categories for multimedia dinosaur CD-ROMs are weighted as follows:

Fun (25%), determined solely by kids, is based on how enjoyable and captivating a program is.

Ease of Use (20%) considers a program's interface, and how easy it is to get started and then move through the program.

Replay (25%) indicates a program's longevity — whether a child will use it long enough to justify its cost.

Reference (30%) rates the quantity and quality of the program's content as it relates to the subject. How the material is presented and how easily a user can find specific data are also considered.

Dinosaur Reference

IT WOULDN'T SURPRISE US if the appetite of a Tyrannosaurus rex were found to pale in comparison to the appetite kids have for information about dinosaurs. One way software developers have sought to satisfy this craving is through dino-sized multimedia encyclopedias on CD-ROM.

These massive compendiums contain databases that make it easy to ascertain the vital statistics of any of these popular prehistoric beasts. The discs also contain numerous depictions of how scientists believe dinosaurs looked (and sounded) when they roamed the earth millions of years ago. Finally, dino CD-ROMs seek to place the lives of the dinosaurs within the context of other natural phenomena, such as the formation of the continents.

Our family testers looked at four dinosaur CD-ROMs: Microsoft Dinosaurs, 3-D Dinosaur Adventure, Dinosaur Museum, and Prehistoria. Since none of these titles state on their packaging what specific age group they are designed for, we asked families with children of all ages to take a look at them. It became obvious during the course of testing, however, that some of these programs are best suited for children eight and up, and others are appropriate for all ages.

The rich content, attractive interface, and easy navigation of Microsoft Dinosaurs made it accessible to all age groups, even to our youngest testers. For this reason, they voted it the clear winner and the best of the dinosaur CD-ROMs.

Ages 6 and up

Microsoft Dinosaurs

Monster title rich in content and good graphics; fun and easy to use

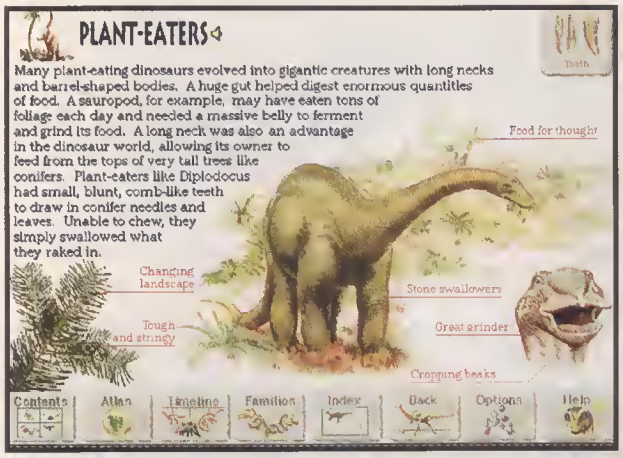
Fun 9
Ease of Use 8
Replay 9
Reference 9

$59.95

Format:
Mac, Windows CD-ROM

Microsoft Corp.
800-426-9400
206-882-8080

MICROSOFT DINOSAURS has it all: rich content, good graphics, and an easy interface. And the navigation achieves the multimedia ideal. You can move anywhere in the program with a mouse click or two. It isn't surprising, therefore, that our family testers voted the title the undisputed champ of the dinosaur CD-ROMs.



Hot Spots Move around more quickly than this sauropod: click on the red text and zip to other parts of the program.

Avenues of Inquiry

Microsoft Dinosaurs provides four main avenues for unaided inquiry: there's an atlas to locate dinosaurs across the earth, a time line to locate the reptiles through the ages, an index, and a list of dinosaurs by family. In addition, you can take fourteen guided tours with dinosaur author Don Lessem and explore basic issues, such as what makes a dinosaur a dinosaur and how to recognize theropods (easy — they all had sharp teeth, menacing claws, and a taste for flesh).

The guided-tour section was popular with many family testers. Robert Linker of Louisville, Kentucky, father of Robby, nine, and Meaghan, eight, found it was "very good for getting kids started with the program and gave them ideas for performing their own searches."

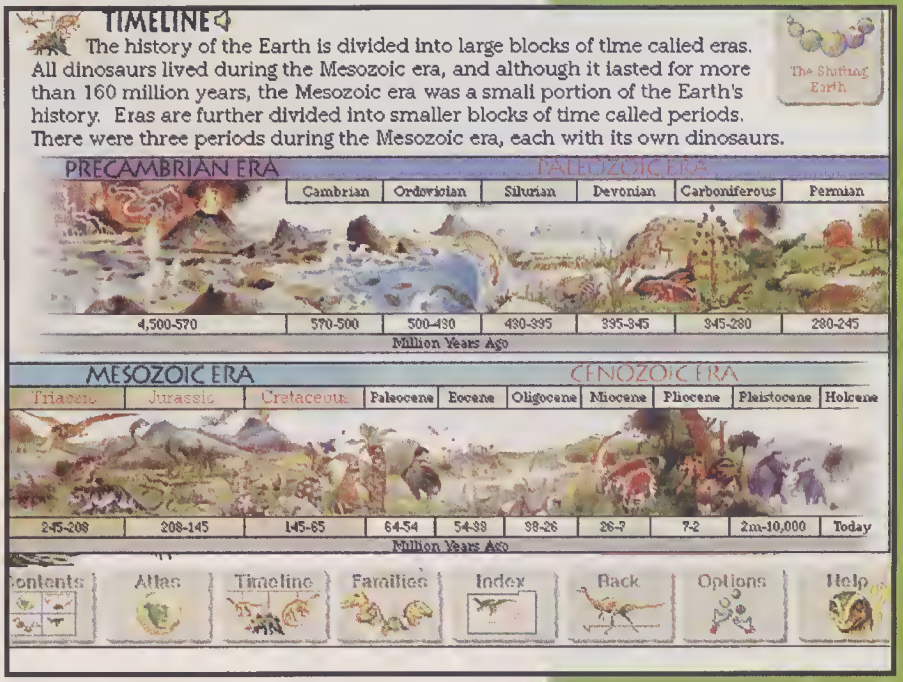
If you need to use material from Microsoft Dinosaurs for a project or just for fun, it lets you print pictures and text. You can also create screen savers and wallpaper of dinosaur pictures.

Gore and More

Some of our younger family testers had a difficult time reading all the text in the title. "I'd recommend this software as a resource tool for children older than seven," said Joanne Masone, a teacher from Severna Park, Maryland. "While prereaders enjoy the movies and many of the guided tours, the quality of the text in this program would be most useful to older children."

Other family testers were dismayed by the graphic character of some of the movies on the disc. "After watching the movies, my six-year-old son Scott pretends to be a 'raptor' and chases his little sister around until I send him to his room," said Beth Lavercombe of Severna Park, Maryland.

Despite these concerns, our family testers generally agreed with teacher Pam Ferree's assessment of Microsoft Dinosaurs. "Through using this software, you can get a wealth of information about dinosaurs that you would spend days researching in a library," she said. "We used this CD when we were teaching a course called Jurassic Science, and the children were drawn to it over and over again."



Picture Perfect Microsoft Dinosaurs won many fans for its gorgeous graphics and easy-to-navigate interface.

Fun 8
Ease of Use 7
Replay 8
Reference 8

$69.95

Format:
Mac, DOS/Windows CD-ROM and disk ($49.95)

Knowledge Adventure
800-542-4240
818-542-4200

Ages 5 and up

3-D Dinosaur Adventure

Long on multimedia pizzazz, but reference material difficult to navigate

THERE'S A GREAT DEAL OF MULTIMEDIA excitement in 3-D Dinosaur Adventure, but many family testers found it hard to navigate the program. Its ease-of-use score of 7 brought its overall score down to 80, 7 points behind the top pick, Microsoft Dinosaurs.

The multimedia excitement with 3-D Dinosaur Adventure focuses on the 3-D glasses that come with the CD-ROM. With these perched on your nose, the program opens with an animation of a roaring Allosaurus pounding menacingly toward you. The stunning realism of this sequence will elicit a "Cool!" or an "Awesome!" from users of all ages.

3-D and Beyond

Many family testers found it difficult to unearth the reference material in the program. Although it contains a section called Reference — featuring a time line, a zoomable world map, and several categories such as Early Life, Herbivores, Carnivores, Paleontology, and Family/Lifestyle — locating specific information about a dinosaur is difficult if you don't know where to look.

Once your child gets a handle on the information in the Reference section, it's time to head into the park and explore the games and activities. Navigating the park can be difficult, however, since kids must slide the mouse to move, which takes practice.

In Save the Dinosaurs, kids roam through a maze of tunnels and ancient landscapes trying to save specific dinosaurs before a comet hits the earth. Kids must be able to recognize dinosaurs by sight, as well as the time period in which they lived.

Name-A-Saurus challenges kids to choose the right dinosaur from among nine illustrations. In Who Am I? kids are shown a close-up of part of a dinosaur and must match it to surrounding pictures of dinosaurs.

"I liked playing Who Am I?," said Jenna Dennis, six, of Chester Spring, Pennsylvania, "because when you score 21 you get to see a purple dinosaur who acts crazy."

The program also includes an activity called Create-A-Saurus where kids get to clothe wireframe dinosaurs with colorful and often wacky skin coverings, such as red and white checks, zebra stripes, wood grain, and rainbow.

Dinosaur Movies includes twenty-five short 3-D animations of individual dinosaurs, as well as short scenes, including Dinosaur Battle, The Hatchling, and Making a Nest.

Those families who did figure out how to plumb the program's depths were pleased with their findings. "My son learned so much about dinosaurs from this program," said Linda McElvenny of Exton, Pennsylvania, of J.P. "He knows which ones are herbivores and carnivores, and he even knows how to pronounce their names (something I can't do)."

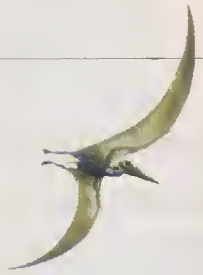
Prehistoric Park Each entrance leads kids to a fun romp with their favorite reptiles.

It's Alive The visual effects in 3-D Dinosaur Adventure will captivate dino fans of all ages.

Ages 8 and up

Prehistoria

Find out about the many creatures that lived in dinosaur times



EVERYONE'S HEARD of the dinosaurs Tyrannosaurus rex and Brontosaurus — but how about Steneofiber and Lagosuchus? In fact, they're not dinosaurs at all but creatures that lived at or before the time of the "terrible lizards." In case you were wondering, Steneofiber was a prehistoric beaver that lived in France and Germany about 65 million years ago. The Lagosuchus, which literally means "rabbit crocodile," is considered a possible ancestor of the dinosaurs.

Lively Lands Click on a time period to watch the way scientists believe earth's land masses evolved.

While our family testers were impressed by the quality of the information in Prehistoria, they felt that much of it was not presented in a way that appeals to children below the age of eight. Our testers voted it third out of the four dinosaur CD-ROMs.

Age of Discovery

Jennifer Offtermatt, a fourteen-year-old from Trabuco Canyon, California, thought Prehistoria was quite a find. Reflecting the program's ease-of-use score, Jennifer said, "I could get everywhere from anywhere. I didn't even have to read a fifty-page manual. It was all self-explanatory." She also appreciated hearing the animals' names pronounced. "It really helps out a lot so you don't make a fool of yourself when you go to share the information," she said.

Prehistoria has seven components: Gallery, Time Tracker, Creature Show, Grolier Museum, Classifications, Knowledge Explorer Audio-Visual Essays, and a search function. Gallery is a creature-by-creature guide to the inhabitants of prehistoric times that employs beautiful illustrations and text that can be printed or saved to disk. In Grolier Museum, various facets of prehistoric life, such as continental drift, are discussed through mini-movies and text.

Minor Multimedia

None of our family testers questioned Prehistoria's bounty of dinosaur-related content. "It's an outstanding reference for students studying about prehistoric times," said Jennifer's dad, Mike. But they were disappointed by its rather "adult" way of presenting the material.

"I think Prehistoria's ability to hold someone's attention is dependent on the user's interest in the prehistoric era," said Lisa Bishop, a teacher from Lutherville, Maryland. "Unfortunately, the program doesn't have the interactive characteristics that keep or develop a child's interest or imagination."

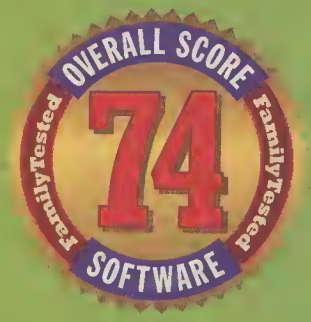
Dino Dancer Palorchestes, an animal that lived in prehistoric times, doesn't look like he could fox-trot. But if he insists, we won't argue.

Fun	8
Ease of Use	7
Replay	7
Reference	8

$69.95

Format:
Mac, Windows CD-ROM

Grolier Electronic Publishing
800-285-4534
203-797-3530



Fun.....7
Ease of Use.....8
Replay.....7
Reference.....7

$59.95

Format:
Mac/Windows CD-ROM, Mac and Windows disk

SoftKey International
800-227-5609
617-494-1200

Ages 10 and up

Dinosaur Museum

Plenty of reference material, but not enough multimedia to captivate kids

In Dinosaur Museum, kids embark on a multimedia exploration of dinosaurs as if they had all the resources of a museum at their fingertips. Our family testers found it easy to use, but they felt it didn't have enough multimedia to keep younger kids interested.

You enter Dinosaur Museum through one of three doors of learning, labeled Library, Conservatory, and Game Room. Naturally, our younger testers raced straight to the Game Room.

The games, which two players can play at once, test kids' dinosaur knowledge through multiple-choice questions using illustrations of dinosaurs or dinosaur-related material. If you get eighty percent of the questions correct, you enter the Hall of Fame, where you can don glasses and view 3-D photographs of dinosaurs.

Some family testers felt there should be smaller rewards for less stellar performances. "The games are educational, but there is little reward when you win," said Dee Whiteside, a teacher from Austin, Texas. "Children are used to praise."

Museum Motif Click on objects in this museum to explore the beasts that ruled prehistoric times.

In the Museum Room, you learn about dinosaur habitats, classification and behavior, and fossil distribution. It also has film clips of dinosaurs from movies such as *One Million Years B.C.*, *Creation*, and *The Lost World*. Through the Conservatory door, you'll find discussion on matters such as the biology of the Mesozoic era, extinction theories, and a Who's Who of dinosaur discoveries.

Multimedia Dinosaur Reference Guides

Here's a brief summary of how our family testers rated the four dinosaur reference CD-ROMs. See the chart below for individual scores.

1st Microsoft Dinosaurs' rich content, attractive interface, and easy navigation make it accessible to all age groups, even youngsters.

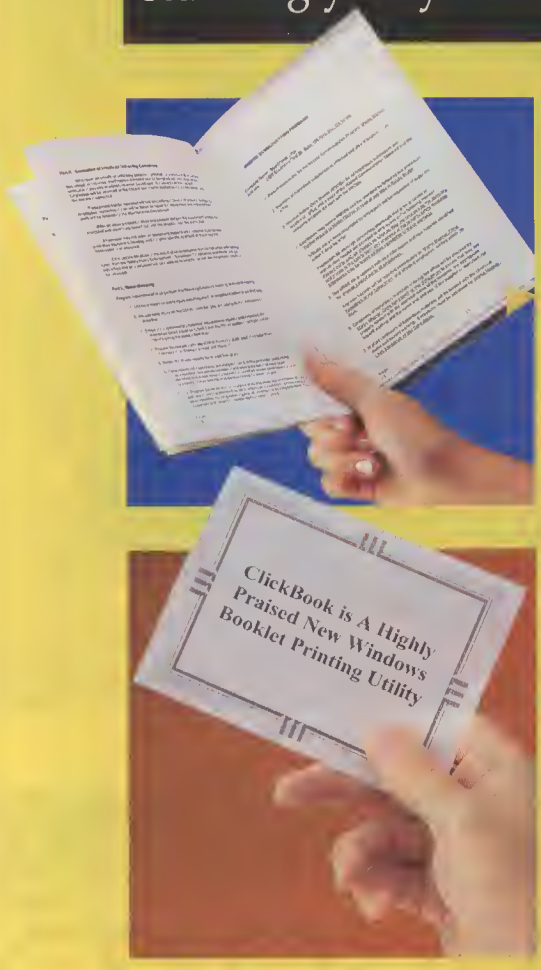
2nd 3-D Dinosaur Adventure entrances kids of all ages with stunning 3-D effects and lots of fun games, but it disappoints with a poorly designed dino database.

3rd Prehistoria places dinosaurs in the context of other prehistoric creatures. Because of the amount of reading required, only kids eight and up will find it useful.

4th Dinosaur Museum is best suited for older children with good reading skills.

Product	Price	Ages	Fun	Ease of Use	Replay	Reference	Overall
Microsoft Dinosaurs, Microsoft, 800-426-9400 or 206-882-8080	$59.95	6 and up	9	8	9	9	87
3-D Dinosaur Adventure, Knowledge Adventure, 800-542-4240 or 818-542-4200	$69.95	5 and up	8	7	8	8	80
Prehistoria, Grolier Electronic Publishing, 800-285-4534 or 203-797-3530	$69.95	8 and up	8	7	7	8	75
Dinosaur Museum, SoftKey International, 800-227-5609 or 617-494-1200	$59.95	10 and up	7	8	7	7	74

"*Click*Book is a great utility that's stunningly easy to use." -PC MAGAZINE, NOV. 23, 1993



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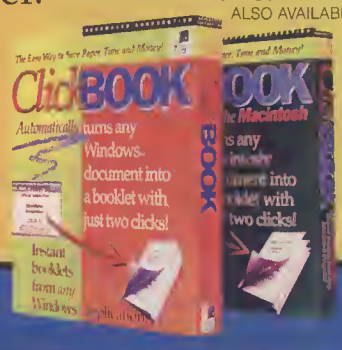

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2470 EL CAMINO REAL • PALO ALTO, CA 94306
(415) 354-8161 • FAX (415) 856-4734

SCORING Methodology

FamilyPC relies on the opinions and experiences of more than 500 families to determine FamilyTested software scores. We recruit these families with the help of FutureKids. On average, twenty families — with children matching the recommended age groups — install, use, and evaluate each software package in their homes using their own computer equipment. In order to familiarize families with a program's features, we asked them to design a calendar with graphics, letterhead with matching stickers, and a greeting card.

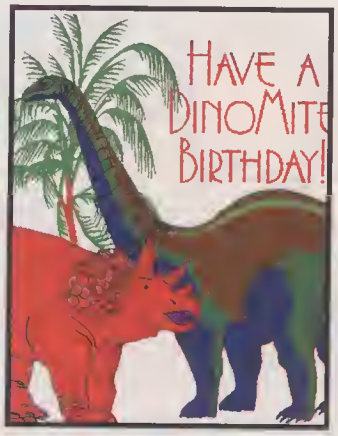
Families complete evaluation forms developed by *FamilyPC* editors, who tabulate scores based on these responses. *FamilyPC* collates the scores from the forms to arrive at a score of from 1 to 10 for each category. The categories reflect specific elements of a group of programs. The scores are weighted in relation to a category's importance to determine a program's overall score. Categories for instant printing software are weighted as follows:

Features (35%) judges the quality, quantity, and relevance of the program's features, and how well they are implemented and work together.

Satisfaction (40%) is based on how valuable the user considers the program's features.

Ease of Use (25%) considers a program's interface and intuitiveness. It also rates documentation, online help, technical support, and ease of installation.

Quick-Printing Software



ONE OF THE EARLIEST "adult" computing domains made accessible to children was desktop publishing. Kids, of course, didn't want to be bothered with arcane issues such as leading, kerning, and color separations. What they wanted was a way to produce lots of neat projects with a minimum of fuss — and so "instant printing" software was born.

Instant printing programs are characterized by their use of colorful and attractively designed templates that contain all the text and graphics boxes for creating such items as greeting cards, flyers, banners, calendars, and more. Just plug in your own words and pictures and print. Although they use predesigned projects, instant printing programs let you add a personal touch by customizing text and graphics, as well as create your own designs from scratch. The programs are usually on CD-ROM and contain a generous supply of clip art and typefaces.

As many of our family testers learned, to get the most out of an instant printing project, you really need a color printer.

Families looked at three all-purpose instant printing programs: Print Artist CD Edition, The Print Shop Deluxe CD Ensemble, and PrintMaster Gold CD Bonus Pack. We also tested two more narrowly focused instant printing programs: CardShop Plus and Announcements for Windows.

Print Shop Deluxe and Print Artist tied for first place, so both earned a *FamilyPC* Top Rated score. PrintMaster Gold came in an honorable third.

The Print Shop Deluxe CD Ensemble

For kids who can read — and their parents — this is the place to shop

Features.....8
Ease of Use.....8
Satisfaction.....9

$80 (street)

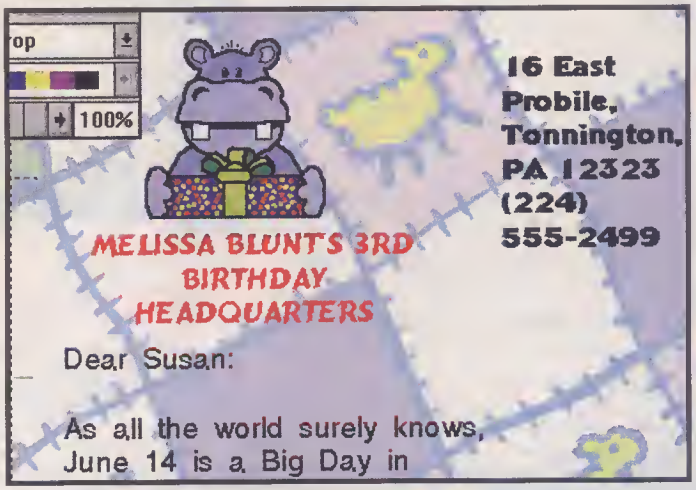
Format:
Mac, Windows CD-ROM

Brøderbund
800-521-6263
413-382-4400

THE PRINT SHOP is the granddaddy of the instant printing programs, and it has always been the one to beat. It began in 1984 as a single disk-based program. Over time, Brøderbund published five complementary disk-based programs — The Print Shop Deluxe, Print Shop Deluxe Companion, Business Graphics, Sampler Graphics, and the Comic Characters Amazing Animals Graphics Folio.

The Deluxe CD Ensemble contains all five Print Shop programs on a single CD. Together these programs include more than 1,000 graphics, 73 fonts, 3,500 text effects, and 10 types of projects. Our family testers discovered that the program has more than kept its creative edge, voting it into a tie for first place with Print Artist.

twelve for pin-fed printers. In addition to regular mailing labels, The Print Shop Deluxe also includes templates for shipping labels, disk labels, return-address labels, and name badges.



Happy Day With loads of graphics and fonts, Print Shop Deluxe can help you produce colorful cards and calendars.

Anything's Possible

"The massive amount of clip art and fonts makes the possibilities with this program endless," said Ernie Delgado, a teacher from Chino, California. "My students have a limitless amount of 'creative fuel' for projects." Ernie won't be surprised to learn that The Print Shop Deluxe was the highest-rated product in the satisfaction category.

Carolyn Purcell from Chino Hills, California, experienced firsthand why The Print Shop Deluxe also scored very well for ease of use. "[My son, Michael, age eleven,] installed the program himself while I was away on vacation and made a 'welcome home' sign as a surprise," she said. "He took to the program very quickly. He taught me how to use it."

Easy to Label

The Print Shop Deluxe scored well for the range of its features. Not only does the program contain plenty of the usual instant printing fare, such as banners, business cards, calendars, letterhead, postcards, signs and posters, and greeting cards, but it also features envelope and label printing, which you can use to run business or family affairs.

The label option allows you to choose from fourteen types of labels for laser printers and

In addition to the clip art and borders included with the program, you can import graphics in .WMF, .BMP, TIFF, and Encapsulated PostScript formats. The Print Shop Deluxe CD Ensemble "is great for children with creative abilities," said Larry and Helen Burroughs from Virginia Beach, Virginia, parents of Adam, age ten. "But adults will enjoy it just as much — or even more."

Instant Color Creating a name badge is easy (below), but as with other instant printing programs, you'll get best results if you have a color printer.

Features 9
Ease of Use 8
Satisfaction 8

$59.95

Format:
Windows CD-ROM

Maxis
800-336-2947
510-254-9700

Print Artist CD Edition

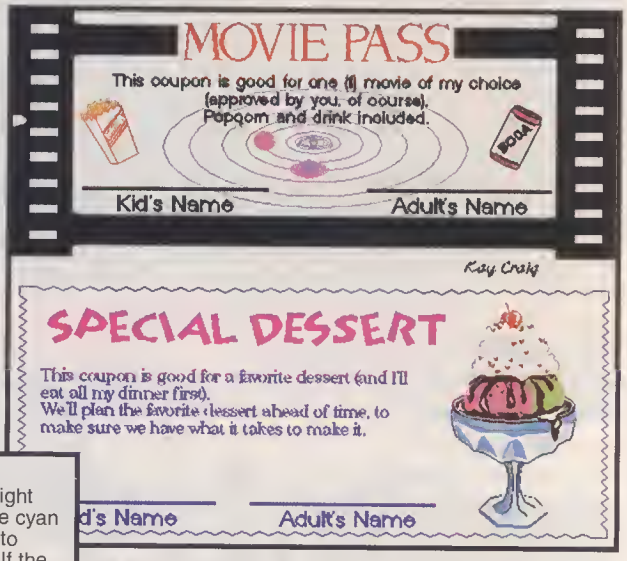
A bounty of features, but not always accessible to young users

Print Artist CD Edition has a wealth of features to turn the family computer into an instant print shop, and so it garnered top honors in that category and tied with The Print Shop Deluxe CD Ensemble for highest score overall.

Print Artist is indeed the features champ among the instant printing programs. It has over 1,500 color and black-and-white graphics, 1,500 layouts, 100 fonts, and 10 project types: signs, business cards, letterheads, certificates, greeting cards, banners, postcards, envelopes, calendars, and crafts. The program also includes GraphicsGrabber, an image browser that lets you search for clip art and import graphics from the Print Shop Deluxe, .BMP, EPS, GIF, TIFF, .PCX, Adobe Graphics, and .WMF file formats.

Print Artist offers the most options for applying special effects to graphics and type. In addition to providing handles that let you stretch and shape graphics and text boxes any way you choose, it lets you choose from a list of ready-made instant shapes, including pennants, arches, tapering, rising, and falling.

"The software can be used by people of any age; I wouldn't limit it to children," said family tester Jeanette Dennis, a mother from Chester Spring, Pennsylvania. "It is comprehensive enough to support any level of need for creating letterheads, news releases, and so on."



Kids' Coupons Don't stop at birthday cards — with Print Artist's features, you can create great gift coupons and certificates, too.

Crafty Hugs In Print Artist you can create craft items such as bookmarks, doorknob hangers, and a special hug for a special boy or girl.

Crafty Capers

Although, like the other instant printing programs, Print Artist features templates for greeting cards, letterhead, and so on, it alone has templates for instant crafts. The Craft categories include Office, Home, Occasion, and Sentiment. Under Cut & Fold were such items as bookmarks, doorknob hangers, and party hats.

As with other projects in Print Artist, clicking on the Crafts button calls up a dialog window with three fields: a list of categories, a list of layouts based on those categories, and a window in which you can preview, in color or monochrome, your selection.

While many family testers were impressed by some of the adventurous offerings found in the crafts sections, others found simpler projects just as exciting. Susan Hasker from Reading, Pennsylvania, the mother of Geoffrey, age ten, is ready to write a thank-you to Maxis, the publishers of Print Artist. "Usually getting birthday thank-you cards out is a major effort at our house," she said. "This year it actually was a rewarding experience, and they looked wonderful." Susan said that Geoffrey also made "fancy return addresses" and printed them on envelopes.

PrintMaster Gold CD Bonus Pack

Audio instructions simplify projects

JUST BECAUSE your child has difficulty reading manuals and navigating online help, it doesn't mean she can't let loose the graphic artist inside her. That is part of the thinking behind PrintMaster Gold, an instant printing program replete with spoken instructions that lead you through every step of creating cards, banners, posters, and more. Its message came through loud and clear to our home testers, as they gave it an 8 for ease of use, a 9 for satisfaction, and an overall score of 82.

Like the other instant printing programs, PrintMaster Gold comes with many extras — 1,800 graphics, 145 scalable TrueType fonts, 50,000 special effects, and hundreds of premade, editable designs. It also has one feature none of the other instant printing programs has: If your PC is equipped with a sound card, you can use PrintMaster Gold's Audio Guide, a female voice that talks you through each step of the process of creating instant art.

"The program is easy to use because of the voice that talks to you," said Gregory Fahl, age eight, from Shrewsbury, New Jersey. Many other family testers, young and old, echoed these sentiments.

You're Invited It's a cinch to create signs, posters, and invitations with PrintMaster Gold.

The Voice

PrintMaster Gold has a very simple interface that consists of a series of buttons that step you through the creation of a print project. With each button you click, you can further refine the look of your project by selecting background, clip art, and text, and by moving and resizing these objects. Below every set of buttons is a loudspeaker symbol and three Audio Guide buttons.

Audio Guide gives such instructions as, "To open a ready-made poster design or work on a saved poster, click on the Open Poster button." For the most part, the advice is easy to understand.

Some family testers complained about not being able to import or edit graphics in PrintMaster Gold. This shortcoming is evidenced by a features score of only 7. But for the most part, family testers had kind words about the talkative program.

"My students are all prereaders, so the audio help and the visuals are great," said Pat Brown, a teacher from Shrewsbury, New Jersey. "Most of my students very quickly learned the basics of the program and enjoyed doing it 'by myself.' "

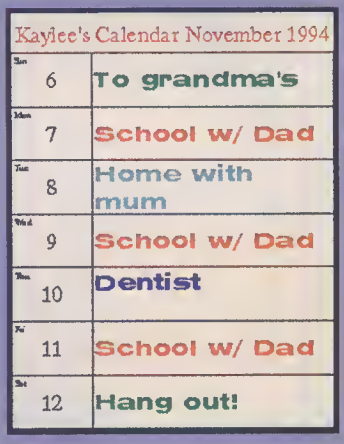
Universal Affection With PrintMaster Gold you can quickly create a card to express your feelings in a fun fashion.

Features 7
Ease of Use 8
Satisfaction.....9

$79.95

Format:
Windows CD-ROM

MicroLogic Software
800-888-9078
510-652-5464



It's a Date Make a personalized calendar to keep track of those special plans.

Now Hear This Voice instructions help nonreaders create projects.

Disney
SOFTWARE

Compatible with IBM/Windows. Macintosh version coming soon.

Pounce!

click Read

play

Simba click

explore

ROAR

Mufasa

laugh click

Timon

Pumbaa

Read

learn

discover

Disney's Animated StoryBook "The Lion King" on CD-ROM.

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It's a classic Disney tale enhanced by the power of CD-ROM, providing a unique experience to share time after time, creating your own Circle of Life.

A free "The Lion King" mouse pad included for a limited time.

©DISNEY

CardShop Plus

Ready-made cards for every occasion — custom cards are more difficult

Features.....7
Ease of Use.....8
Satisfaction.....8

Windows:
$39.95
Mac:
$49.95

Format:
Mac, Windows disk

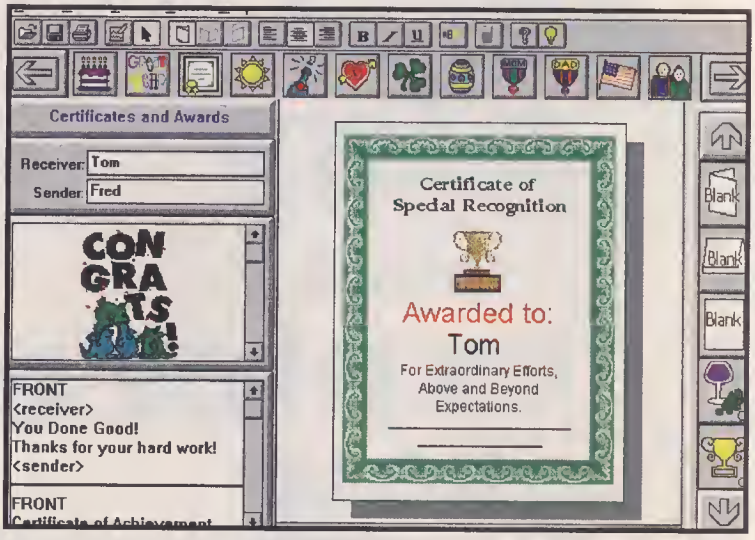
Mindscape
415-883-3000

Cards and More CardShop Plus lets you create cards quickly and easily and includes 1,500 ready-made messages.

CardShop Plus is a one-stop shop for designing and printing cards for all occasions. While our family testers were impressed by how easy the program was to use, they were disappointed by its lack of features. Because of this, and because of the stiff competition it faced, family testers rated CardShop Plus their least favorite of the four instant printing programs we considered.

CardShop Plus comes with 400 pieces of clip art and 5 fonts. It also includes more than 1,500 ready-to-use messages to place on cards and more than 700 predesigned cards. You can personalize any of these ready-made designs or design your own card from scratch with just a few mouse clicks. The program allows you to import graphics in .WMF, .BMP, and Photo CD formats, so you can easily personalize cards using family photos.

"You could create a card and print it out in fifteen minutes," said family tester Meredith Good from Escondido, California. She said that by using CardShop Plus, her ten-year-old daughter Brie "made a unique thank-you card for each child that came to her birthday party."



Special Effects Cards aren't the only rewards in CardShop Plus. You can make certificates and awards, too.

Congratulations

Reflecting the program's high rating for replay value, Jack Leader from Newton, Massachusetts, the father of Nick, seven, noted that the thank-you notes are a nice idea and helped Nick get in the habit of sending them.

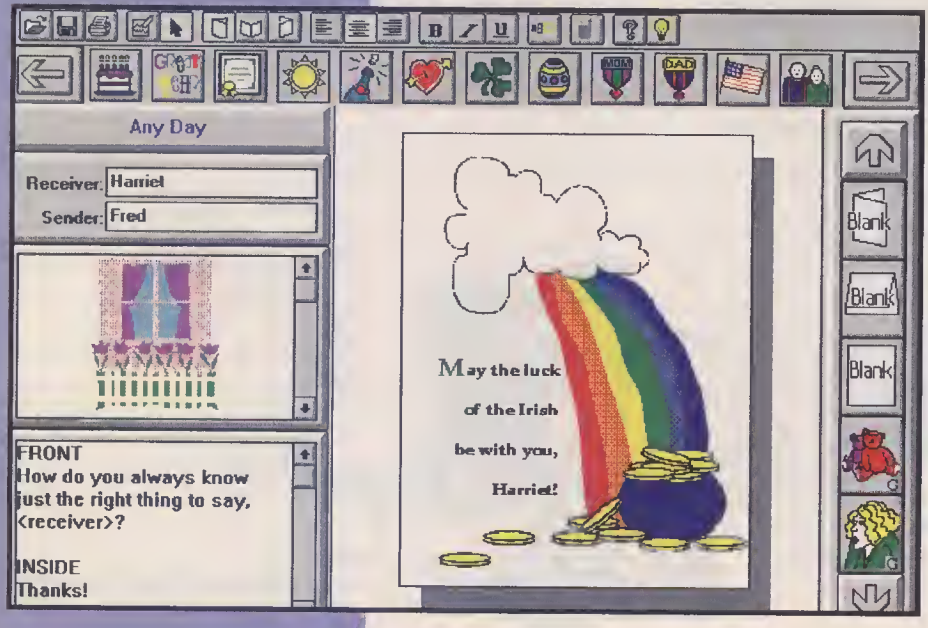
CardShop Plus also pleased cost-conscious dads. "Don't use the expensive card-making machine at the store," said Michael Herrmann, a father from San Diego, California. He suggested instead that parents invest in an instant printing program such as CardShop Plus.

Get Well Soon

Our family testers had several gripes about the program. Marjorie Kimnach, a mother from San Marcos, California, found that installing CardShop Plus can be difficult. "Even though we had enough disk space for installation, we kept coming up short when the program categorized the clip art," she said. "We'd free up more and try it again — half an hour each time. I think we tried three times before we were successful."

Other family testers said that resizing text and graphics was not as simple as they would have liked. For example, text doesn't automatically wrap inside a text box; to get that effect, you have to insert carriage returns manually.

"It has limited scope compared to other packages — it specializes in cards," said Kimo Carter, a teacher from Lexington, Massachusetts. "And it's difficult and counterintuitive to create original work."



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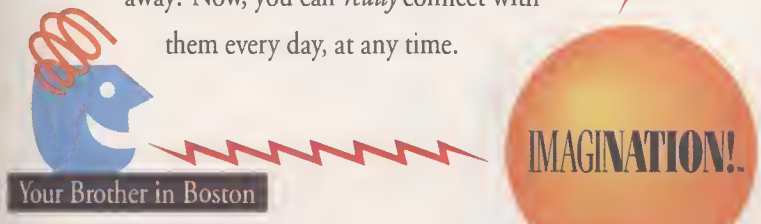

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YOUR SIGNATURE _____

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2. A brand new membership with 5 free hours of network time to use within the first 30 days to get acquainted with new friends. After you use your free hours, our regular rates will apply.

TRY IT FREE!

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Get Your Family on ImagiNation Today...

Announcements for Windows

Inexpensive but not as easy to use or as versatile as it could be

Features.....7
Ease of Use.....8
Satisfaction.....7

$49

Format:
Windows CD-ROM and disk

Parsons Technology
800-223-6925 or 319-395-9626

ANNOUNCEMENTS for Windows received a lukewarm reception from our family testers. While they thought it was a capable program, most didn't consider it very rich in content or very easy for young children to learn or use.

With Announcements for Windows, you can create cards, posters, envelopes, business cards, gift certificates, and brochures. The program comes with 200 pieces of clip art, and it can produce twenty text effects. You can import .CGM, .PCX, .WMF, TIFF, and .WPG graphics formats, and group text and graphics for easy handling.

Limited Choices

A frequent criticism of Announcements was voiced by Linda McElvenny, a teacher from Exton, Pennsylvania: "It's a little difficult for young kids to use," she said. "They would need a lot of assistance and may get frustrated."

Older kids, particularly those with good reading skills, found Announcements to be a good "beginner" instant printing program. However, once they had used it for a while, they wanted the larger collections of layouts, artwork, and fonts offered by competing products.

"The program is not as versatile as we would have liked and did not offer many choices," said Andrew Marks from Bethesda, Maryland, father of Stephen, age ten.

Fancy Fonts Create unique invitations with Announcements.

Instant Printing Programs

1st (tie) Print Artist CD Edition is the features king among the instant printing programs, with 1,500 graphics and 1,500 layouts. Nonreaders will need help from Mom and Dad.

1st (tie) The Print Shop Deluxe CD Ensemble, which sports 3,500 text effects, was popular with kids and parents for both fun and business.

3rd PrintMaster Gold CD Bonus Pack's Audio Guide makes it great for someone who doesn't want to rely constantly on manuals, but not being able to import graphics limits the program's usefulness.

4th CardShop Plus is very good at what it does, but it lacks the range of projects found in the CD-based programs.

5th Announcements for Windows is light on features and typefaces when compared to the other instant programs tested.

Product	Price	Features	Ease of Use	Satisfaction	Overall
Print Shop Deluxe CD Ensemble, Broderbund, 800-521-6263 or 413-382-4400	$80*	8	8	9	85
Print Artist, Maxis, 800-336-2947 or 510-254-9700	$59.95	9	8	8	85
PrintMaster Gold, MicroLogic Software, 800-888-9078 or 510-652-5464	$79.95	7	8	9	82
CardShop Plus, Mindscape, 415-883-3000	$39.95 (Windows) $49.95 (Mac)	7	8	8	78
Announcements for Windows, Parsons Technology, 800-223-6925 or 319-395-9626	$49	7	8	7	74

* Estimated street price

SCORING Methodology

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The scores are weighted in relation to a category's importance to determine a program's overall score. Categories for family adventure games are weighted as follows:

Fun (40%), determined solely by parents and kids, is based on how enjoyable and captivating a game is.

Ease of Use (25%) considers a program's interface and how easy it is to get started and then move through the program.

Replay (35%) indicates a program's longevity — whether a family will use it long enough to justify its cost.

Adventure Games

FINDING COMPUTER GAMES that don't contain violent action and intent can be a real adventure for concerned parents. The good news is that software developers are discovering that there's a healthy market for the non- or minimally violent adventure game.

Witness the success of Myst. Myst's developers decided from the outset that their game would contain no violence. They also decided on an abundance of high-quality graphics, music, and gamesmanship. The result? Myst is one of the most successful games ever, selling in excess of 500,000 copies.

Not surprisingly, our valiant band of family testers voted Myst their top pick among the five family adventure games we reviewed. The other games tested, in order of popularity, were Inherit the Earth: Quest for the Orb; Wrath of the Gods; Fables and Fiends: Legend of Kyrandia; and Al Qadim: The Genie's Curse.

Adventure games share many things in common. First, there is a quest — an ultimate mystery to unravel — often in the form of good seeking to overcome evil. Second, "good" usually takes the form of a character whom the player controls. And third, there are all manner of obstacles, challenges, and puzzles that the player must meet with courage, cunning, and wisdom.

Solving adventure games as a team can make them even more fun. For this reason, of all the software available for your computer, adventure games are especially well suited to family participation and family fun.

Myst

Surrealistic adventure entrances as it exercises your brain

MYST IS AN ADVENTURE game the likes of which you have never seen before. Its surrealistic atmosphere, ingenious puzzles, and gorgeous graphics and music captivated our family testers so much that they rated it the best of the five games we evaluated.

"It's a thrilling experience for all ages and super fun," said family tester Kylie Hopkins, eleven, from Severna Park, Maryland. "It had great animation and great sound effects."

Rocket Science Click here to enter an infuriating maze.

move around the screen — you are the player, it's your adventure. Nor is there any inventory to gather and dispense — only clues to uncover and puzzles to solve. And there is no violence (a conscious intent of the creators).

Being so different from usual adventure games, Myst left several of our family testers in a fog about its goal. "This game needs to be played by someone who can use their imagination and exploring techniques," said family tester Michele Spinner, a teacher from Massapequa, New York. "If the child has a lot of time and patience and doesn't get frustrated, I think he or she will become engrossed in this game."

Stunning Realism

Families were entranced by Myst's 3-D photo-realistic graphics and the game's professionally scored sound track and sound effects.

"The graphics are beautiful and the music is fitting with the mood of the game," said Michele Spinner.

"Overall, it's an excellent game for the entire family," said B.J. Burger, twelve, from Severna Park, Maryland. "I have to congratulate the creators. So much work and detail. Good job, guys."

By the Book

In Myst you discover that a character named Artus has mastered the art of creating fantastic worlds, called Ages, by writing books. But someone has been destroying the books and Artus suspects one of his two sons, Sirrus and Achenar. In a rage at this betrayal, Artus locks the sons in a red and blue book respectively. Each book contains a garbled video message from the brothers. As you search for red and blue pages scattered amongst the Ages and place them in the books on Myst Island, the brothers' messages become clearer. To find pages, you must solve puzzles in each Age, such as channeling water through pipes to power various devices.

Unlike most adventure games, Myst uses no "character" that you

No Mystery One thing that's clear about Myst is that the graphics are out of this world.

OVERALL SCORE **87**

Fun 8
Ease of Use 9
Replay 9

$55 (street)

Format:
Mac, Windows CD-ROM

Brøderbund
800-521-6263
415-382-4400

Fun 9
Ease of Use 8
Replay 9

$59.95
(Mac CD-ROM)
$39.95
(DOS CD-ROM, disk)

Format:
Mac, DOS CD-ROM; DOS disk

New World Computing
800-325-8898
818-889-5600

Familiar Faces Poker-playing dogs are among the characters you'll encounter.

Inherit the Earth: Quest for the Orb

A cartoon fairy tale set in a world ruled by animals

INHERIT THE EARTH: Quest for the Orb is a fascinating mixture of fairy-tale story and science-fiction adventure. Our family testers rated it top for fun and gave it an overall score of 86, making it one of two *FamilyPC* recommended family adventure games.

Using colorful animation and a cast of anthropomorphic animals, Inherit the Earth is the tale of one fox's quest to recover the Orb of Storms, a magical device that predicts the weather and is thus important to the creatures.

In the Doghouse Rif faces a curious crowd at the canine castle.

As a fox named Rif, you have been unjustly accused of stealing the Orb of Storms. While under the distrustful scrutiny of Okk the boar and Eeah the elk, you must prove your innocence by recovering the magical object. If you don't recover it, your mate, a fox named Rhene, will remain a captive of the boar clan. To find the Orb, you must collect clues, solve many puzzles, and traverse many mazes.

Animal Instincts

Testers of all ages found the game fun. "The fantasy stories are great — they had suspense and adventure along with action activities," said Grant Grissom, ten, from Austin, Texas. "You can really tell what the story is about from the beginning."

Several family testers weren't so jolly in their quests. They would have liked more hints in the manual to help them along. "Success totally depends on a child's ability to persevere through frustrations — or luck out," said Toni Schaaf, from Coto De Caza, California, mother of Trevor, age nine. Mike Nazar from Austin, Texas, said his son Nicholas, twelve, found another way to master the game: "He seemed frustrated until he bought the clue book."

You can find some help in the attractively designed interface. Dialogue appears above whichever character is speaking, while at the bottom of the screen, the face of the character with whom Rif is interacting is shown. The bottom portion of the screen also lists such commands as "take," "walk to," "look at," and "talk to."

And in the End...

While Inherit the Earth: Quest for the Orb may have the appearance of a Saturday morning cartoon, it clearly requires the investment of a number of family resources — not least, a considerable amount of gray matter.

"It's a challenging game with an intriguing storyline and characters," said Elisa Cook from Pacific Palisades, California, the mother of Thomas, age eight. "It's excellent for teaching children about analysis of events, piecing together clues, and how to logically gather evidence. The game is difficult even for adults! We all spent hours playing the game."

Babysitter in a box.

Creativity in a box.

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New! Available Now

MicroGrafx™
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Wrath of the Gods

Meet the challenges of the Greek myths and be a hero in ancient Greece

Greece to Me Photos and actors give this family adventure game a unique look.

AN ADVENTURE GAME based on Greek mythology, Wrath of the Gods features a fascinating combination of digital video of actors in full costume and photos of Greece.

As the player, you are on a quest to regain your kingdom, but to do so you must battle the many-headed Hydra, navigate the labyrinth of the Minotaur, and steal the Golden Fleece from a fire-breathing dragon.

Our family testers rated Wrath of the Gods the easiest to use of the five adventure games we tested and one of the most enjoyable to play.

"It's great fun to travel through Greece. You never know who or what you might meet," said Donna Freeman of Jacksonville, Florida, mother of ten-year-old Clayton. "You can learn about Greece, Greek myths, map skills, and geography. I anticipate this will be a hit with our family for years."

You use icons to guide the character on his quest. The information icon brings up reference material about Greek myths, such as the fact that Hercules had to fight the Hydra to make up for a crime. If you don't find the information you need here, you can consult the oracle, although this will cost you points off your score.

Eileen Garofalo of Jacksonville, Florida, mother of Peter, age nine, noted that Wrath of the Gods "requires deductive reasoning, persistence, and a willingness to work through the unknown. Peter has not studied mythology in school, but this did spark his interest."

OVERALL SCORE 84 FamilyTested SOFTWARE

Fun 8
Ease of Use 9
Replay 8

$59.95

Format:
Mac, Windows CD-ROM

Luminaria
800-821-2060
415-284-6464

The Legend of Kyrandia

Court jester Malcolm wants to be all-powerful — you must stop him

Mighty Mischief Can you catch Malcolm in time?

THERE IS DISCORD in the magical land of Kyrandia, and it's your job to save the day. Kyrandia is a land of dark, mysterious forests and sleeping dragons, a fantasy land where rubies grow on trees and magic abounds. Malcolm, the court jester, has slipped off his royal rocker and taken off with the precious Kryagem, the source of all magic. As Brandon, the rightful prince of Kyrandia, you must recover the Kryagem.

Richard Sobol of Lexington, Massachusetts, father of Jonah and Daniel, found Brandon's quest an enjoyable diversion. "Legend of Kyrandia is a fun, upbeat, bright, nonviolent fantasy game that we enjoyed playing together," he said.

In this role-playing fantasy adventure, you move through four progressively challenging quests. Brandon interacts with other characters through cartoon-style dialogue balloons, so kids need to be able to read to learn what's going on.

Fables and Fiends: The Legend of Kyrandia is the first in a series of three games based on the miscreant Malcolm. The action and suspense continues in The Hand of Fate (Book Two) and Malcolm's Revenge (Book Three). Both are available on CD-ROM for Windows only.

OVERALL SCORE 81 FamilyTested SOFTWARE

Fun 7
Ease of Use 8
Replay 9

$30 (street)

Format:
Mac, Windows disk;
Windows CD-ROM

Virgin Interactive
800-874-4607
714-833-8710

Al-Qadim: The Genie's Curse

Help the corsair battle sorcerers, restore his family name, and find his beloved

Water Wings Confront the water genie in hopes of picking up a new clue.

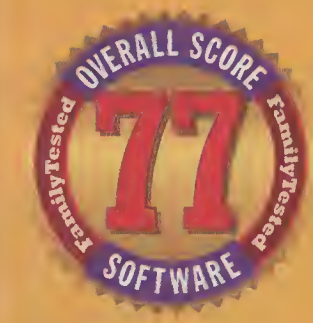
In Al-Qadim: The Genie's Curse, the world of the Arabian Nights touches down in a puzzle-filled digital landscape. Although it scored fairly well for replay value, it received the lowest overall score of the five adventure games tested.

In Al-Qadim, a genie has escaped his master, and only a young corsair can save the world from the threat this poses. The player plays the part of the brave young lad, who must solve puzzles, discover clues, and finish quests to gain experience points and move on to new adventures. There is some combat in the game, but not much.

"I liked all the sights and sounds of Zaratan — walking through the garden, the secret doors in one of the houses, the songs," said James Breeden, eight, from Smithville, Texas.

The game took a hit in ease of use (scoring only a 7), as evidenced by many testers' comments. "The level of difficulty affects only the voracity of the monsters, not the puzzles," said Sara Seifter of Columbia, Maryland, mother of Mark, nine. "Thus, even in the easy mode, it is difficult to win."

Al-Qadim is a Dungeons & Dragons computer game. This means it subscribes to some of the storytelling techniques of that role-playing game. Dee Whiteside, a teacher from Austin, Texas, doesn't think that should scare parents away from Al-Qadim. "It's a fun game," she said, "without the sinister connotations usually attached to D&D."



Fun 8
Ease of Use 7
Replay 8

$55 (street)

Format:
DOS CD-ROM and disk

Strategic Simulations
800-245-4525
408-737-6800

Family Adventure Games

1st Myst is a captivating and confounding surrealistic adventure with gorgeous graphics and music.
2nd Inherit the Earth: Quest for the Orb lets you hone reasoning skills and have fun in a hybrid fairy-tale story and science-fiction adventure,
3rd The Legend of Kyrandia is, as one family tester put it, "a fun, upbeat, bright, nonviolent fantasy game that we enjoyed playing together."
4th Wrath of the Gods is an easy-to-use game that makes the myths of the ancient Greeks come alive today.
5th Al-Qadim: The Genie's Curse is a somewhat violent Arabian Nights adventure, with genies to battle and a lost love to find.

Product	Price	Ages	Fun	Ease of Use	Replay	Overall
Myst, Brøderbund, 800-521-6263 or 415-382-4400	$55*	8 and up	8	9	9	**87**
Inherit the Earth: Quest for the Orb, New World Computing, 800-325-8898 or 818-889-5600	$59.95 (Mac) $39.95 (DOS)	7 and up	9	8	9	**86**
Wrath of the Gods, Luminaria, 800-821-2060 or 415-284-6464	$59.95	8 and up	8	9	8	**84**
The Legend of Kyrandia, Virgin Interactive, 800-874-4607 or 714-833-8710	$30*	8 and up	7	8	9	**81**
Al-Qadim: The Genie's Curse, Strategic Simulations, 800-245-4525 or 408-737-6800	$55*	8 and up	8	7	8	**77**

* Estimated street price

Budget Ink-Jet Printers

For small-scale printing chores, you can't go wrong with a black-and-white ink-jet

By Jon Pepper

A PRINTER IS A NATURAL ADJUNCT TO A FAMILY PC AND SHOULD be at the top of your add-on wish list. The problem, of course, is that a new laser or color ink-jet printer can easily set you back $500 or more. If you've just sunk upwards of $2000 into a new multimedia PC, this may be more than the family budget can bear. The answer for many budget-conscious families is a low-cost — under $300, in many cases — black-and-white ink-jet printer. To help you find the best one for your family, we put eleven of the most popular models through their paces.

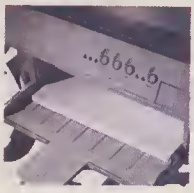
Photographs by Lightworks Photographic

Clean Sweep The Canon BJ-200e won Top Rated and Best Buy honors.

What You Get

Black-and-white ink-jet printers aren't on the high end of the excitement spectrum. Don't expect your twelve-year-old to exclaim that your new low-cost black-and-white ink-jet is "totally cool." However, though they lack the pizzazz of color ink-jets and the speed and quality of laser printers, nothing provides more value for less money than a budget ink-jet. You should think of it as the printing equivalent of a Honda Civic: not too flashy, but a cost-effective way to get you where you want to go.

Most of the printers we tested produce high-quality text output — something you couldn't say about ink-jet printers as a group just a few years ago.



In spite of their low cost, these printers are surprisingly capable. Although low-cost ink-jets lag behind laser printers in print quality, you will be hard-pressed to tell the difference. And unlike some lasers, all the black-and-white ink-jets we tested were easy to use. Best of all, prices are so low that many models sell for less than half of what a laser printer costs. In fact, nine of the eleven printers we evaluated sell for less than $300, some of them for much less.

Of course, at these prices, expect some trade-offs. All the printers we tested are slow compared to laser printers, though they are comparable to and often faster than higher-priced color ink-jets. At best, you get half the text throughput — or about two pages per minute — that you get from a low-end laser printer. At worst, you get perhaps a quarter of the speed when printing text. Also, only three of the printers we tested can be upgraded to color; if your kids are going to give you a hard time about how their colorful artistic masterpieces look boring when printed in black and white, your choice will be limited to the three low-cost ink-jets from Hewlett-Packard. Two other drawbacks also characterize these printers: paper capacities are usually lower than what you find with laser printers, and the cost per page is higher (see "Ink-Jet Costs versus Laser" on page 111).

Sizing Things Up

We rated black-and-white ink-jet printers using six test criteria that are meaningful for a family-oriented product: out-of-box

How We Compute the Ratings

To arrive at our final scores, FamilyPC *tests and ranks each printer based on the six evaluation criteria listed below.*

1

Out-of-Box Experience (5% of Score)

Ink-jets in this class are simple products, and setting them up should be equally simple. It should take no more than thirty minutes for your family to get the printer out of the box, connected to your PC, and ready to go — including software installation. The less fuss you or your family members need to endure, the higher the score. Prominently placed unpacking and setup instructions are a plus.

2

Ease of Use (15%)

Once it is set up, your ink-jet printer should require about as much thought and attention as, say, a lamp. Every once in a while you'll add paper and an ink cartridge (which should be easy tasks), and that's about it. Everything about the product ought to be designed to make its maintenance and use fun instead of frustrating.

3

Print Quality (25%)

The best ink-jet printers should produce output that is very close in quality to that of a good laser printer. That means sharply rendered text that has a professional appearance. Some products include a special technology that smooths out the edges of type to remove any jagged appearance. We used Microsoft Works to create both text and text-with-graphics documents to use in the tests. As these printers are intended primarily to be text machines, we don't weight the quality of graphics output very highly.

4

Print Speed (15%)

Our tests covered printing time for text and graphics documents, but they were weighted to the text side. We created the test documents in Microsoft Works. None of the tested printers is going to break any speed records — which is why we awarded no 9s or 10s in this category — but all the top-rated products can turn out a two-page letter in a reasonable time and are fast enough for use in most family settings.

5

Warranty and Support (15%)

What happens when you run into trouble with your printer, or the product malfunctions? Although problems should be rare, the vendor should stand behind the printer. Your family should expect at least a one-year parts-and-labor warranty. Two or more years is better, as is toll-free phone support. Some vendors offer rapid exchange policies so that you are never without a printer for a long period of time.

6

Comparative Value (25%)

This criterion is our rating of the overall value of a particular product. To arrive at a value rating, we total the above ratings and factor in the *FamilyPC* Average Street Price. In addition, we added a point to those printers — all from Hewlett-Packard — that later let you add color capability. We establish the *FamilyPC* Average Street Prices by making hundreds of anonymous inquiries to retailers all over the country.

experience, ease of use, print quality, print speed, warranty and support, and comparative value. The rating in any category can range from 0 to 10. We found a lot of variability in many categories. For example, warranties varied from one to three years, and support practices differed from company to company. Some offer toll-free tech support, while others make you pay. As you'd expect in an evaluation of budget printers, we gave great weight to comparative value — an estimation of the overall value of a printer that weighs its features and quality against its price. This category accounts for twenty-five percent of our final rating. After all, what good is a "budget" printer that breaks your budget?

Most of the printers we tested produce high-quality text output — something you couldn't say about ink-jet printers as a group just a few years ago. The top printers produce near-laser-quality text. Most of the products were also relatively easy to set up and use, much more so than laser printers and color ink-jet printers that we tested in the November/December and September/October issues, respectively. This is in part a testament to the simple and workmanlike nature of these monochrome ink-jets.

Our test group included eight printers for PCs: the Canon BJ-200e, the Canon BJ-230, the Canon BJ-10sx, the Hewlett-Packard DeskJet 540, the Hewlett-Packard DeskJet 320, the Epson Stylus 800+, the Epson Stylus 400, and the Citizen Projet II. We tested three models designed for Macs: the Apple StyleWriter II, the Apple Portable StyleWriter, and the Hewlett-Packard DeskWriter 540. Three of the products, the BJ-10sx, DeskJet 320, and Portable StyleWriter, are portable printers weighing between three and five pounds; the rest are designed for desktop use.

The winner in our test group was the Canon BJ-200e, which scored three 10s, including one for comparative value. It thus earned both the *FamilyPC* Best Buy recommendation and Top Rated honors. If you want attractive monochrome printing for a remarkably low price, this emerged as the best choice.

Hewlett-Packard deserves kudos for its DeskJet 540 and DeskWriter 540, identical products designed for PCs and Macs, respectively. They also scored a 10 for comparative value — thanks to a color upgrade

Ink-Jet Costs versus Laser

Ink-jet printers may be an inexpensive initial purchase, but before you buy one, your family should consider how much it will cost you to operate an ink-jet printer for a couple of years. The answer may surprise you.

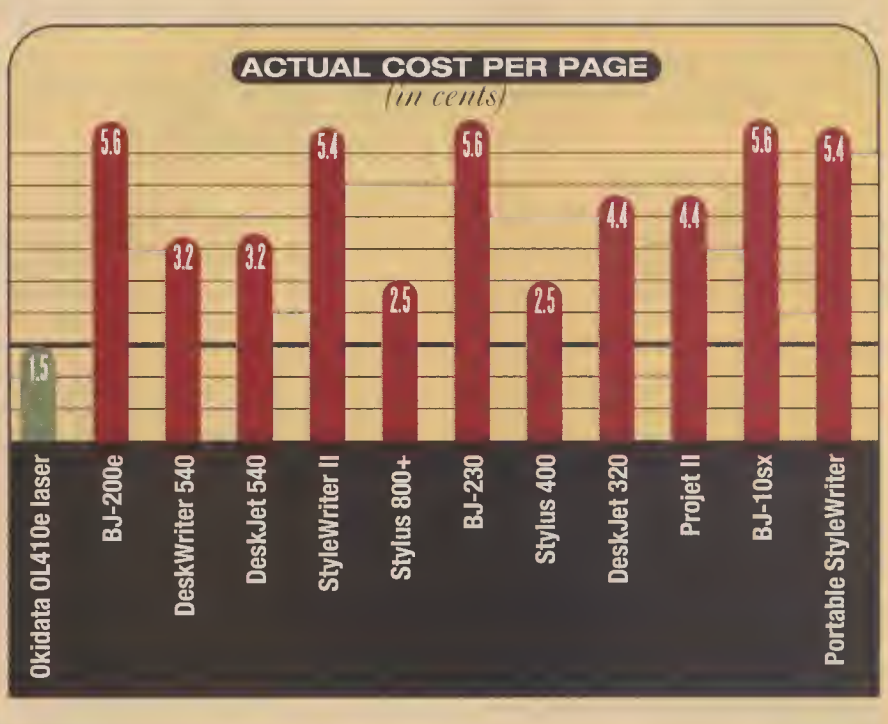
While laser printers tend to cost approximately one to two cents per page for operation (exclusive of paper), ink-jet printers cost more per page. Typical costs are three cents to five cents per page for the products in our *FamilyPC* test group.

What does this mean for your family? Let's look at a couple of examples. If you are using a Canon printer like the BJ-200e, the ink cartridges cost $25 each and are rated at 450 pages (for a per-page cost of 5.6 cents). If your family prints 100 pages a month, your yearly cost for consumables will be a bit less than $70. Push that total to 200 pages a month, and over two years you'll spend about as much in ink cartridges as it cost to buy the BJ-200e (or about $240).

One reason for the relatively high cost of ink-jet cartridges is that most companies (HP, Apple, and Canon, for example) use a cartridge design that combines the ink and a disposable printhead. Other companies have opted for different designs. For instance, Citizen uses an $8 ink cartridge that snaps into the $27 printhead. The cartridges need to be replaced every 250 pages, and the printhead itself replaced about every twelfth ink-cartridge swap. So if your family prints 250 pages a month, you would replace the ink cartridge monthly and the printhead once a year — for a total of about $123 a year in consumables. At 100 pages per month, the cost is just a bit less — 4.4 cents — than with the Canon BJ-200e example cited above.

To their credit, vendors are trying to reduce the cost of ink-jet printing, and Hewlett-Packard's new high-capacity cartridge for the DeskJet and DeskWriter 540 is rated at 1,000 pages and costs $31.95, or about two cents per page less than the current Canon pricing. Still, it is unlikely that prices will drop to rival the per-page cost for laser printers.

Is that a reason to forgo ink-jets? We don't think so. Most families will find that the significantly lower initial cost of a monochrome ink-jet printer more than compensates for the slightly higher per-page cost. This is particularly true if you aren't going to be printing hundreds of pages each month. However, it is worth remembering that the ultimate cost of your new printer includes both purchase price and operational costs, and you should adjust the family budget accordingly.



option — though their lower overall score kept them from being awarded Best Buy. Both HP printers are highly recommended. Apple's StyleWriter II, which is based on the same print engine as the BJ-200e, finished just behind the HP printers. One other printer, the Epson Stylus 800+, also earned the *FamilyPC* Recommended rating. You won't go wrong with any of these products.

In addition to the recommended products, we take special note of one other printer. The Canon BJ-230 is a version of the BJ-200e that can handle 11- by 17-inch paper. While this printer didn't earn a *FamilyPC* Recommended rating, its special features may appeal to you.

Shopping Hints

A few items are worth keeping in mind when you consider a monochrome ink-jet printer for your family. First, only the Apple printers come with a printer cable, meaning you'll need to buy this necessary item if you don't already have one (expect to spend around $15).

Another consideration is performance. As we mentioned before, these products

Printing rates vary greatly depending on the complexity of your document and the print-quality mode you choose.

aren't speed demons, and all print well below the speeds of laser printers — usually in the range of one to two pages of text per minute. The rate varies depending on the complexity of the document and the print-quality mode you choose. While slow printing shouldn't be much of a problem for most families, if you plan on regularly churning out fifty-page reports on tight deadlines, you will be better off with a laser printer.

Another factor to consider is the cost of consumables. An ink-jet costs more to operate per page than does a laser printer. Here again, although the difference does add up, it shouldn't matter for the volume of printing most families are likely to produce. However, if you're looking for a printer for both your family and your home office and you expect it to see plenty of use, then you'll save money in the long run with a laser printer. For example, one of the two Top Rated laser printers in *FamilyPC*'s November/December FamilyTested Hardware was the Okidata OL410e, with a street price of $680 and a cost per page of 1.5 cents. With a street price of $230, the Canon BJ-200e — which won this month's Top Rated award — is obviously a lot cheaper. But printing a page with the BJ-200e costs 5.6 cents. Over two years, if you print about 450 pages per month, the Okidata will actually be cheaper overall — purchase price plus operating costs — than the Canon.

A final factor to consider in shopping for an ink-jet is paper quality. These printers are designed to print on plain paper — that is, anything from letterhead to copier paper. They'll also do a fine job printing envelopes, transparencies, and even card stock in some cases. However, because of the peculiarities of the ink, you should experiment with different types of paper to find one that gives you the best results at a reasonable cost per page. This is especially true if you will print a lot of graphics, as some types of paper are more prone to promoting ink bleed than others. If you're doing a lot of graphics work, you may want to invest in a more expensive coated paper.

If you had been considering a dot-matrix technology for a low-cost printer, our advice is, don't. Ink-jets are a much better value and are the most printer you can get for the least amount of money. They aren't as fast as lasers, but the price sure is right.

Jon Pepper *is a contributing editor for* FamilyPC *and lives in Massachusetts.*

Tested Text Speeds

Canon BJ-200e (black-and-white ink-jet): 2 ppm
Okidata OL410e (low-cost laser): 4 ppm
HP DeskJet/DeskWriter 560C (color ink-jet): 1.5 ppm

What The Scores Mean

FamilyPC's unique FamilyTested Hardware procedure produces a score for each black-and-white ink-jet printer. Scores can range from 0 to 100 and represent the percentage of available points a printer garners during the testing process. You can use the following table to interpret the scores.

100–95
Nearly flawless; *FamilyPC* Recommended; why look elsewhere?

94–85
Excellent; *FamilyPC* Recommended; won't let you down.

84–75
May feature special capabilities you want that eclipse its shortcomings.

74–65
Needs work; flawed in more than one area; caveat emptor.

64 and under
Several major flaws.

In addition to the *FamilyPC* Recommended products, we present a Top Rated award to the printer with the highest score, and Best Buy to the printer that earns a 10 in the Comparative Value category. If more than one product is rated 10 in Comparative Value, we present the Best Buy award to the one with the highest overall score.

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5381-1-95

FPC0295

THE *FAMILYPC* REPORT CARD

Budget Ink-Jet Printers

Model	BEST BUY TOP-RATED PC Canon BJ-200e	RECOMMENDED HP DeskJet 540	RECOMMENDED TOP-RATED MAC HP DeskWriter 540	RECOMMENDED Apple StyleWriter II	RECOMMENDED Epson Stylus 800+	Canon BJ-230
Out-of-Box Experience	10	9	9	9	9	10
Ease of Use	10	9	9	10	9	10
Print Quality	9	9	9	9	8	8
Print Speed	8	8	8	8	8	7
Warranty and Support	9	9	9	7	8	9
Comparative Value	10	10	10	9	9	8
OVERALL SCORE	93	91	91	87	85	84

Model	Epson Stylus 400	HP DeskJet 320	Citizen Projet II	Canon BJ-10sx	Apple Portable StyleWriter
Out-of-Box Experience	9	8	8	8	8
Ease of Use	9	7	8	7	7
Print Quality	8	8	8	7	7
Print Speed	6	6	6	6	6
Warranty and Support	8	8	8	9	7
Comparative Value	7	8	7	7	7
OVERALL SCORE	77	76	75	72	69

For PCs

Canon BJ-200e

The top-rated Canon BJ-200e combines print quality, support, ease of use, and overall value

CLEARLY A CUT ABOVE, our top-rated budget ink-jet printer is the Canon BJ-200e. With three 10s, it has just about everything you could ask for in a low-cost ink-jet printer. It is compact, refreshingly easy to use, and capable of very fine print quality. Plus, the BJ-200e is most affordable, with an average street price of $230. For reliable printing on a budget, this is a winner.

Setup was straightforward, and the BJ-200e got extra credit for some nice touches that made the task trouble-free. For instance, while several companies (including Canon) provide a quick-start guide to ease the setup process, Canon also prints both the unpacking instructions and the toll-free help-desk number and hours on the inside carton flaps. No fumbling around inside a manual to look for a support number is necessary while you are setting up the printer.

At just 6.6 pounds, the BJ-200e is the lightest printer we tested except for the portable ink-jets, so parents or kids can comfortably move it from room to room if need be. The top-mounted control-panel buttons are easy to access and understand, although in practice it is unlikely you'll need to use them at all. Canon also deserves credit for providing some excellent software, including an online manual.

A resolution of 360 dots per inch gives the BJ-200e crisp and eminently readable text. With support for up to 256 shades of gray, the BJ-200e also churned out some of the best graphics among the tested printers — though, at one page per minute, you may not want to make graphics printing more than an occasional event. Although the output quality is a grade below that of a good laser printer, our family testers were impressed by the overall resolution and document quality the Canon printer offered, and so were we.

At two text pages per minute, the print speed on the Canon won't take any awards away from laser printers, although it more than held its own within our test group, where the fastest printer rated just a fraction over two pages per minute. For printing reports, memos, correspondence, or other small documents, the speed on the BJ-200e should be more than adequate.

Quality and Value The BJ-200e earned both Top Rated and Best Buy honors.

Most families are rightly concerned about getting good support with computer products, and Canon backs the BJ-200e with a solid two-year warranty. The product has toll-free technical support that is open until 11 P.M. EST, so you don't have to squeeze in a call during your work hours. Canon's two-year warranty includes a rapid exchange policy for defective printers.

With its print quality, space-saving design, ease of use, and generous support at one of the lowest prices in our test group, the Canon BJ-200e is an outstanding value. It's a fine choice to provide your family with trouble-free printing at a modest price.

Out-of-Box Experience: 10
Ease of Use: 10
Print Quality: 9
Print Speed: 8
Warranty and Support: 9
Comparative Value: 10

$230
Average Street Price

Basic Specifications:
Parallel port, 2-year parts-and-labor warranty, printer cable not included

Canon Computer Systems, Inc.
2995 Redhill Avenue
Costa Mesa, CA 92626
800-848-4123
714-438-3000

PROS
Good print quality, solid support, compact size

CONS
No color option, high cost per page

Out-of-Box Experience: 9
Ease of Use: 9
Print Quality: 9
Print Speed:.....8
Warranty and Support: 9
Comparative Value:.....10

$294
DeskJet 540
$320
DeskWriter 540
Average Street Prices

Basic Specifications:
DeskJet 540
Parallel port, 3-year parts-and-labor warranty, printer cable not included
DeskWriter 540
Serial/AppleTalk port, 3-year parts-and-labor warranty, printer cable not included

Hewlett-Packard Company
Direct Marketing Organization
P.O. Box 58059
MS511L-SJ
Santa Clara, CA 95051-8059
800-752-0900
415-857-1501

PROS
Good print quality, long-term support, color option

CONS
Large external power supply, no toll-free support

For PCs and Macs

Hewlett-Packard DeskJet 540 and DeskWriter 540

The DeskWriter 540 is our top-rated Mac printer, while the DeskJet 540 is a compelling choice for PC families

CLOSE BEHIND OUR top-rated Canon was a fine duo from Hewlett-Packard: the DeskJet 540 for families with a PC, and the virtually identical DeskWriter 540 for families with a Macintosh. Both printers scored 10s for comparative value and 9s almost everywhere else. Whether you prefer a Mac or a PC, you'll find an HP 540 that can provide excellent text and graphics output for the price, along with a design that is as functional as it is attractive.

HP designed the 540 series for families and home offices, and its focus on ease of use and value is evident. In fact, our family testers touted the ease of setup and quality of instructions. One example of HP's attention to detail: open the lid on the printer housing, and there is a color diagram that shows how to install the ink cartridge and set the paper tray for either letter-size sheets or envelopes. The 540 can hold up to 100 sheets of plain paper, 20 envelopes, or 30 cards. Overall, the paper-handling capabilities of the DeskJet and DeskWriter are the best of the tested printers.

Matched Set The 540 series printers are HP's budget offerings to both Mac and PC users.

HP ships capable software for these ink-jets. The printer drivers have enough built-in intelligence to automatically choose the best printer settings for the type of document you are printing, although you can fine-tune those choices manually if you wish.

The key appeal of the HP DeskJet 540 or DeskWriter 540, though, is the print quality. Documents from the 540 were as good as or better than those from any tested printer. This is due in part to the 600- by 300-dot-per-inch resolution for black-and-white printing, and a technique called Resolution Enhancement that smooths out the jagged edges on type for crisper-looking documents.

Both of the 540 models can also print in color with the addition of a $49 color kit. Because the color print capability is already in the HP software, adding color is as easy as swapping the black print cartridge for the tri-color cartridge.

As with the rest of these low-cost ink-jets, the 540 model won't impress with its print speed. One of our family testers found it to be particularly slow at printing graphics. Of course, the 540 and its low-priced brethren are slow compared to higher-priced ink-jets and lasers. Compared to the other printers in its class, however, it is on the speedy end of the scale, which means you can expect speeds of from one to just over two pages per minute for documents without graphics.

Hewlett-Packard backs the 540s with the longest warranty in the business: three years for parts and labor. The one drawback is that HP doesn't provide a toll-free number for technical support.

All told, the DeskJet and DeskWriter 540 are impressive products. They are simple and reliable in operation, with print quality as good as we've seen in this class of product, as well as the option to add color. We recommend both of the 540s highly.

For Macs

Apple StyleWriter II

Sharp text output and a fine design make this a good buy for families that own Macs

IF YOUR FAMILY HAS A MACINTOSH, then the Apple StyleWriter II is strong competition for the HP DeskWriter 540 as the best choice for your family. With a 10 for ease of use, the StyleWriter II does a good job of meeting your family's key requirements for a low-cost ink-jet. Based on the same print engine as Canon's BJ-200e, the the use of software to control all other features. Along with the other advantages offered by the StyleWriter II — the easy loading of paper and envelopes and the ease of changing print cartridges — the single control button made the StyleWriter II one of the easiest of the reviewed products to use. Once you've installed it, your entire family should enjoy using this printer with little or no trouble.

Apple's decision to go with Canon's "bubble-jet" technology turns out to have been a wise one. We found that a wide range of text and graphics docu-

OVERALL SCORE **87** FamilyTested HARDWARE

Out-of-Box Experience:	9
Ease of Use:	10
Print Quality:	9
Print Speed:	8
Warranty and Support:	7
Comparative Value:	9

$297
Average Street Price

Basic Specifications:
Serial port, 1-year parts-and-labor warranty, printer cable included

Apple Computer, Inc.

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JCS1AAB

FamilyPC

Out-of-Box Experience: 9
Ease of Use: 9
Print Quality: 9
Print Speed: 8
Warranty and Support: 9
Comparative Value: 10

$294
DeskJet 540
$320
DeskWriter 540
Average Street Prices

Basic Specifications:
DeskJet 540
Parallel port, 3-year parts-and-

For PCs and Macs

Hewlett-Packard DeskJet 540 and DeskWriter 540

The DeskWriter 540 is our top-rated Mac printer, while the DeskJet 540 is a compelling choice for PC families

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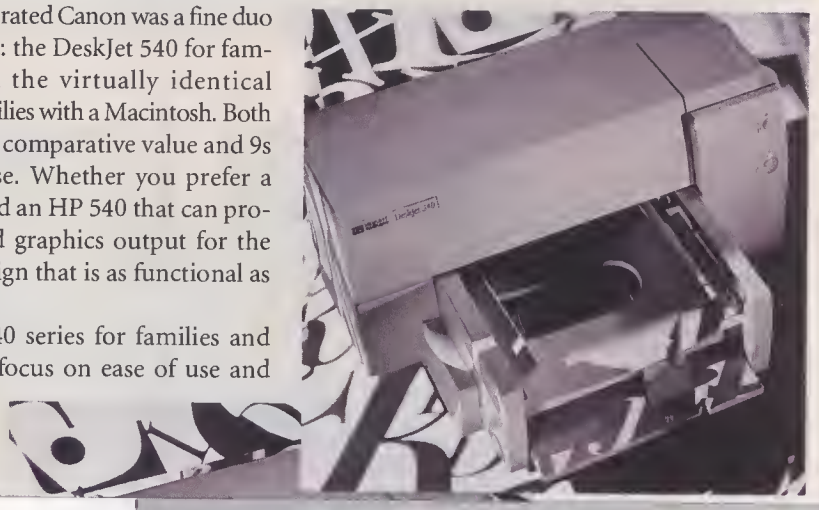

HP designed the 540 series for families and home offices, and its focus on ease of use and value is evident. In fact, our family testers touted the ease of setup and quality of

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For Macs

Apple StyleWriter II

Sharp text output and a fine design make this a good buy for families that own Macs

IF YOUR FAMILY HAS A MACINTOSH, then the Apple StyleWriter II is strong competition for the HP DeskWriter 540 as the best choice for your family. With a 10 for ease of use, the StyleWriter II does a good job of meeting your family's key requirements for a low-cost ink-jet. Based on the same print engine as Canon's BJ-200e, the StyleWriter II shares many of the same fine traits: good print quality, a convenient design, and trouble-free operation.

Complete Solution The StyleWriter II delivers one-button ease of use and can serve several Macintoshes at once.

The task of getting the small, lightweight StyleWriter II out of the box and set for use is uncomplicated. However, our family testers noted the lack of an easily located quick-start page. Still, you should have your StyleWriter II ready to print in about twenty minutes. One other plus: the StyleWriter II was the only recommended product to come with a printer cable.

The most significant external change from the design of the BJ-200e is Apple's use of just a single button on the control panel and, consequently, the use of software to control all other features. Along with the other advantages offered by the StyleWriter II — the easy loading of paper and envelopes and the ease of changing print cartridges — the single control button made the StyleWriter II one of the easiest of the reviewed products to use. Once you've installed it, your entire family should enjoy using this printer with little or no trouble.

Apple's decision to go with Canon's "bubble-jet" technology turns out to have been a wise one. We found that a wide range of text and graphics documents printed on the StyleWriter II looked very good with its 360-dot-per-inch resolution, while the print speed was fine for text but somewhat slow for documents that made heavy use of graphics. One feature that sets the StyleWriter II apart is support for GrayShare, which enables the printer to be shared among several Macs without any additional hardware. This feature will save you and your printer a lot of wear and tear if you need to print from more than one Macintosh.

One important area that could be improved with the StyleWriter II is product support. Apple provides only a one-year warranty with its printers. Two- and three-year warranties were the norm among the rest of the products that we tested, so the Apple policy seems somewhat lacking by comparison.

Even so, these are only minor blemishes on what is clearly a superior product. With its fine-looking output, ease of use, and quiet operation, the Apple StyleWriter II can certainly make itself at home with your family.

OVERALL SCORE 87 (FamilyTested HARDWARE)

Out-of-Box Experience:	9
Ease of Use:	10
Print Quality:	9
Print Speed:	8
Warranty and Support:	7
Comparative Value:	9

$297
Average Street Price

Basic Specifications:
Serial port, 1-year parts-and-labor warranty, printer cable included

Apple Computer, Inc.
1 Infinite Loop
Cupertino, CA 95014
800-538-9696
408-996-1010

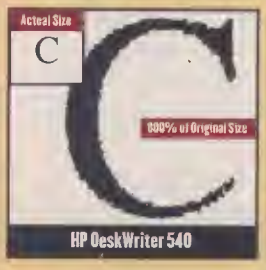
PROS
Attractive printed output, easy to use

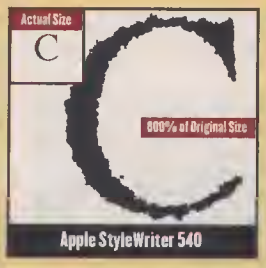
CONS
Stingiest warranty, slow graphics printing, no color option

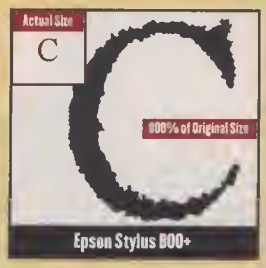
Compare the Fine Print

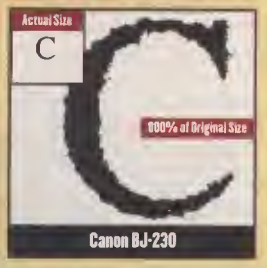
For a long time, ink-jet printers have had a reputation for poor-quality text output. As the samples below attest, this reputation is based on dated information. Advances in printhead and ink technology let ink-jets produce very acceptable, high-quality text that, at normal sizes, is nearly indistinguishable from 600-dot-per-inch laser output.

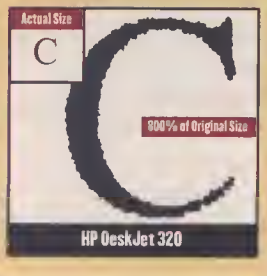
Magnified views show the difference between ink-jet and laser output better; they also demonstrate the advantages of printers — such as the HP 540s — that include resolution-enhancing technology. If concerns about quality have kept you from considering ink-jet, think again.

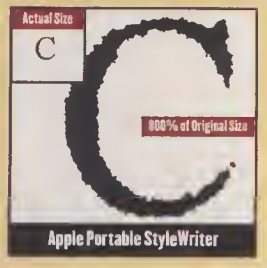












Ink-Jet Features

Model	BJ-200e	DeskWriter 540	DeskJet 540	StyleWriter II	Stylus 800+
Overall score	93	91	91	87	85
Manufacturer	Canon	HP	HP	Apple	Epson
Company phone no.	800-848-4123 or 714-438-3000	800-752-0900 or 415-857-1501	800-752-0900 or 415-857-1501	800-538-9696 or 408-996-1010	800-289-3776 or 310-782-0770
For (Mac/Windows)	Windows	Mac	Windows	Mac	Windows
FPC Average Street Price	$230	$320	$294	$297	$243
Speed as tested	2 ppm	<2 ppm	<2 ppm	2 ppm	>2 ppm
Interfaces	Parallel	AppleTalk	Parallel	Serial	Parallel
Cartridge cost/Est. life	$25/450 pages	$31.95/1000 pages	$31.95/1000 pages	$26.95/500 pages	$17.50/700 pages
Ink cost per page	5.6 cents	3.2 cents	3.2 cents	5.4 cents	2.5 cents
Color-option cost	n/a	$49	$49	n/a	n/a
Weight	6.6 lb.	11.6 lb.	11.6 lb.	6.6 lb.	10.6 lb.
Toll-free tech support	Yes	No	No	Yes	Yes
Warranty	2-year plus "instant exchange"	3-year	3-year	1-year	3-year limited

Speeds are approximate. Portable speeds are all downgraded because no multipage printing was possible.

For PCs

Epson Stylus 800+

A low cost per page separates the Stylus 800+ from the competition

Cost-Conscious Compared to the competition, the Epson Stylus 800+ costs very little to own and operate.

WITH STEADY PERFORMANCE in all areas, the Epson Stylus 800+ finished just behind the top two printers for families with PCs. The Epson has plenty of fine features, including crisp text from its 360-dot-per-inch print engine, and some of the fastest print speeds among our tested products.

Setup and operation were smooth processes, and Epson is to be complimented for being one of the companies to include support numbers clearly printed on the shipping carton. This is an easily implemented detail that we feel should be part of every product designed for families.

Because it uses a proprietary variation on ink-jet design, the Stylus 800+ also had one of the lowest operating costs. It uses just 2.5 cents' worth of ink to print a page. Print quality from the Stylus 800+ was impressive for documents containing text only, although the higher-rated printers did a better job rendering gray-scale graphical images. Still, the Stylus 800+ has very handsome output, and, at just over two text pages per minute, it is a relatively speedy performer.

So what's the downside for your family? Not much. The Stylus is a bit clunkier and heavier (at 10.6 pounds) than some of the higher-rated printers, and we had a few more paper jams than with other products.

Out-of-Box Experience: 9
Ease of Use: 9
Print Quality: 8
Print Speed: 8
Warranty and Support: 8
Comparative Value: 9

$243
Average Street Price

Basic Specifications:
Parallel port, DOS/Windows drivers, 3-year parts-and-labor warranty, printer cable not included

Epson America, Inc.
20770 Madrona Avenue
Torrance, CA 90503
800-289-3776
310-782-0770

BJ-230	Stylus 400	DeskJet 320	Projet II	BJ-10sx	Portable StyleWriter
84	77	76	75	72	69
Canon	Epson	HP	Citizen	Canon	Apple
800-848-4123 or 714-438-3000	800-289-3776 or 310-782-0770	800-752-0900 or 415-857-1501	310-453-0614	800-848-4123 or 714-438-3000	800-538-9696 or 408-996-1010
Windows	Windows	Windows	Windows	Windows	Mac
$443	$198	$299	$265	$245	$379
<2 ppm	1 ppm	1 ppm	1.5 ppm	1 ppm	1 ppm
Parallel	Parallel	Parallel	Parallel	Parallel	Serial
$25/450 pages	$17.50/700 pages	$21.95/500 pages	$8 ink (250 pages); $27 head (3,000 pages)	$25/450 pages	$26.95/500 pages
5.6 cents	2.5 cents	4.4 cents	4.4 cents	5.6 cents	5.4 cents
n/a	n/a	$49	n/a	n/a	n/a
7.7 lb.	10.6 lb.	4 lb.	8.8 lb.	3.7 lb.	4.5 lb.
Yes	Yes	No	No	Yes	Yes
2-year	3-year limited	1-year/$49 for 3-year	2-year	2-year	1-year

Out-of-Box Experience: 10
Ease of Use: 10
Print Quality: 8
Print Speed: 7
Warranty and Support: 9
Comparative Value: 8

$443
Average Street Price

Basic Specifications:
Parallel port, 2-year parts-and-labor warranty, printer cable not included

Canon Computer Systems, Inc.
2995 Redhill Avenue
Costa Mesa, CA 92626
800-848-4123
714-438-3000

For PCs

Canon BJ-230

Quality printing for larger paper sizes distinguishes this printer

TAKE THE TOP-RATED Canon BJ-200e and stretch it out so it can accommodate larger paper sizes, and you've got the BJ-230 printer.Otherwise, the basic feature set of the BJ-230 is identical to that of the BJ-200e, which means good things for your family. The print quality from the same 64-nozzle, 360-dot-per-inch printhead is excellent, and the setup and ease-of-use features are also essentially the same.

Wide Body If your art projects require big pages, you'll love the BJ-230.

In fact, the key difference between the two printers is the BJ-230's ability to handle paper sizes up to 11 by 17 inches. This printer was designed with businesses in mind, since the larger format is ideal for accounting and other applications where you might want to squeeze more data onto a printed page. However, it might have some appeal for your family, too. For example, if you are printing newsletters or doing your budgeting on a spreadsheet, the extra space could certainly come in handy.

However, there is a price for this larger format, and the BJ-230 was one of the most expensive printers we tested, with prices as much as $200 more than for the printers designed to handle letter-size paper.

Consequently, despite its excellent print quality, support, and ease of use, the BJ-230 isn't quite the value if you don't require 11- by 17-inch printing. If you do, then this printer is for you. FPC

Other Printers Tested

The following printers round out our group of tested ink-jet products

Epson Stylus 400
Score: 77

The Epson Stylus 400 is a DOS/Windows printer that comes in the same physical package as the *FamilyPC* Recommended Epson Stylus 800+ and shares many of that product's commendable features, such as good print quality. However, it is much slower than the Stylus 800+. With a street price below $200, the Stylus 400 is the least expensive printer we tested, but price isn't everything. Go for a printer with more speed, like the Stylus 800+.

HP DeskJet 320
Score: 76

The DeskJet 320 is one of three portable ink-jet printers we tested. Designed to work with DOS/Windows computers, it features print quality similar to that of the highly rated HP 540 models, as well as the same $49 color option. However, the DeskJet 320 is difficult to set up; also, to print more than one page at a time, it requires an optional sheet feeder (which will set you back about $99). One other negative is its one-year warranty. The DeskJet 320 is not a great value for families unless your family PC is a portable.

Citizen Projet II
Score: 75

The Citizen Projet II uses a unique two-piece head design, with a long-lasting printhead and replaceable ink containers. Setup and print quality for this DOS/Windows printer were average, and the print speed was also about average. Unfortunately, while there is little to criticize about this printer, there is little to recommend, either. The Projet II simply doesn't have enough to compete against the top-rated products from Canon, Hewlett-Packard, and Epson.

Canon BJ-10sx
Score: 72

Another portable product for DOS/Windows systems, the Canon BJ-10sx provides good print quality and is quite compact. But this printer suffers the same ills as the other portables: it will print only one page at a time without an optional sheet feeder. Not a good family value.

Apple Portable StyleWriter
Score: 69

The Portable StyleWriter is a Macintosh printer based on the same design as the Canon BJ-10sx, and it shares the same pluses and minuses. The good-looking printed output and the printer's diminutive size can't offset the need to feed paper one sheet at a time. Also, with a street price of $379, the Portable StyleWriter is one of the most expensive printers we tested. Not a recommended product for families.

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This new program from Davidson will guide your child from hearing sounds to actually reading words. Talking creatures, toe-tapping music, and colorful animations encourage children to join in and enjoy the magic of learning about written words!

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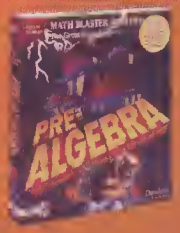

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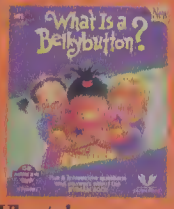

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Age 3-8

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Age 3-9

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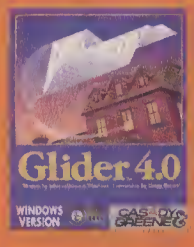
DOS,WIN,MAC DISKETTE **34.95**
WIN/MAC CD-ROM **39.95**



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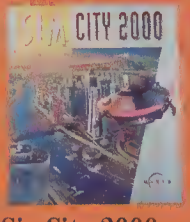

SimCity 2000
Age 11 & Older

Design, build, and run your own city with this highly addictive yet educational game from Maxis. Detailed animation and sound effects bring your city to life. A best-seller and award winner!

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Myst

Journey to an island world surreastically tinged with mystery! This best-seller from Broderbund has received rave reviews for its unique approach to interactive adventure, and it will have everyone in the house addicted to its challenging puzzles and beautiful graphics and sound.

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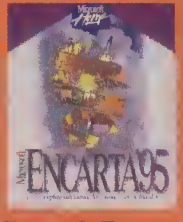

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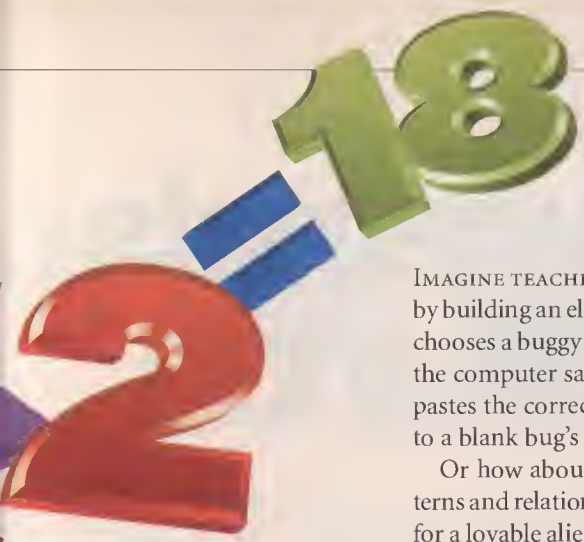


Teach your children the fun-damentals of early math with your family PC and some magical math software

MATHEMAGIC

BY JUDY BREWER

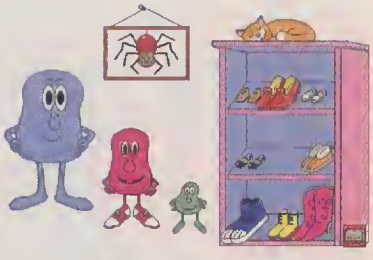
IMAGINE TEACHING your preschooler the value of numbers by building an electronic bug on your family computer. She chooses a buggy body part and a number from 1 to 10, and the computer says aloud the number and body part, then pastes the correct number of eyes, legs, spots, ears, or feet to a blank bug's body.

Or how about a gentle introduction to numerical patterns and relationships that asks your child to build a bridge for a lovable alien named Loid by matching shapes, letters, and numbers. Basic geometry and spatial reasoning are just a game when your child uses a variety of shapes to build a mouse house for a family of friendly mice.

Today, the best math software teaches the fundamentals of mathematical ability — number sense, patterns and relationships, geometry, and problem solving — and turns your family PC into a patient, energetic, creative, and flexible teacher for your child to use whenever the math bug bites.

FamilyPC outlines the fundamental mathematical principles parents will want to stress with preschoolers through second-graders and evaluates some of the top math software for kids in this age range (roughly three to seven years old). We also include several noncomputer games you can create on your family PC that will further animate and illustrate the lessons of early math.

Like most children, my son Matthew sorts the world of mathematics into two categories: school math and neat math. School math (also known as "boring math") includes most of the tasks that pop readily to mind — addition, subtraction, multiplication, and division (teachers call them *operations*). Most of us probably remember school math in stark terms — rows of menacing-looking numbers marching across the top of a worksheet. A lucky few had a favorite teacher who turned school math into neat math, who could tame the numbers and somehow coax them into revealing their secrets. With the right software, you and your family PC can do the same thing: drive home the lessons of school math without forgetting what can be neat about it.



Little, Middle, and Big In Millie's Math House, a family of friendly barefoot creatures needs shoes, and it's your child's job to pick appropriate shoes for small, medium, and large creatures.

Photographs by Jim Gipe

Four Fundamentals Of Early Math

These basic principles of early math form the foundation for higher-order reasoning and problem-solving skills

TO MAKE MATH a subject children enjoy rather than endure, parents need to understand the principles of early math and buy software or create games that reinforce those fundamentals. School math often gives kids the sense that solving math problems leads only to harder problems (and more complex solutions). But the best early-math software (see reviews on pages 126 to 134), as well as neat math games created with your PC and a simple draw and paint program (see "Tangram Game," page 125), emphasize real-world applications of math problems and encourage children to connect math basics with real-life objects and situations.

1 Number Sense

Parents should encourage children to join, separate, and compare objects in sets long before they have (or need) the abstract concepts to do this numerically. Counting is not the same as number sense — lots of children can count correctly before they get any meaning from the numerals 1 to 10.

Set Sense Create copies of stamps and you can play classification and early-math games that teach number sense or patterns and relationships.

Create a fun number-sense game using stamps from a simple drawing program. The stamps should fit into classes of objects — such as vehicles of various types, or zoo, wild, and domestic animals. Make your stamps as large as your program will allow and print them on heavy stock paper. Color them (if you don't have a color printer), sandwich them in contact paper, and then cut them out.

Using small bowls, boxes, a doll house, or egg cartons, make up stories that require your child to classify and combine the objects. Suggest that your child put into the doll house all the animals that usually live with people and put the other animals in a shoe box (the zoo). Or have him make suggestions for sets — all the pink ones, the ones that go fast, or the ones he likes best.

After classifying objects, ask your child questions about the quantities in each set and use them as a basis for comparison (which has more animals in it when we classify them this way, the house or the zoo?). Check out the Oyster Park and Bubble Blaster games in Math Ace Jr. (page 128) for more number-sense activities.

2 Patterns and Relationships

Mathematics is the study of patterns and of the rules that explain regularities in the physical world. Patterns can be simple (like day and night) or more complex (like the pentatonic musical scale). By helping your child recognize patterns and relationships, you give her a head start on problem-solving tasks, logical sequencing, and understanding number patterns such as base ten and place value.

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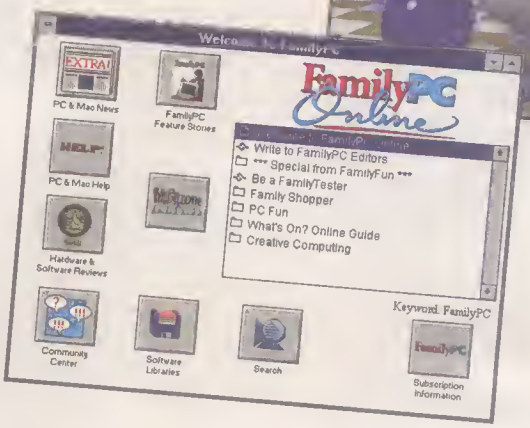

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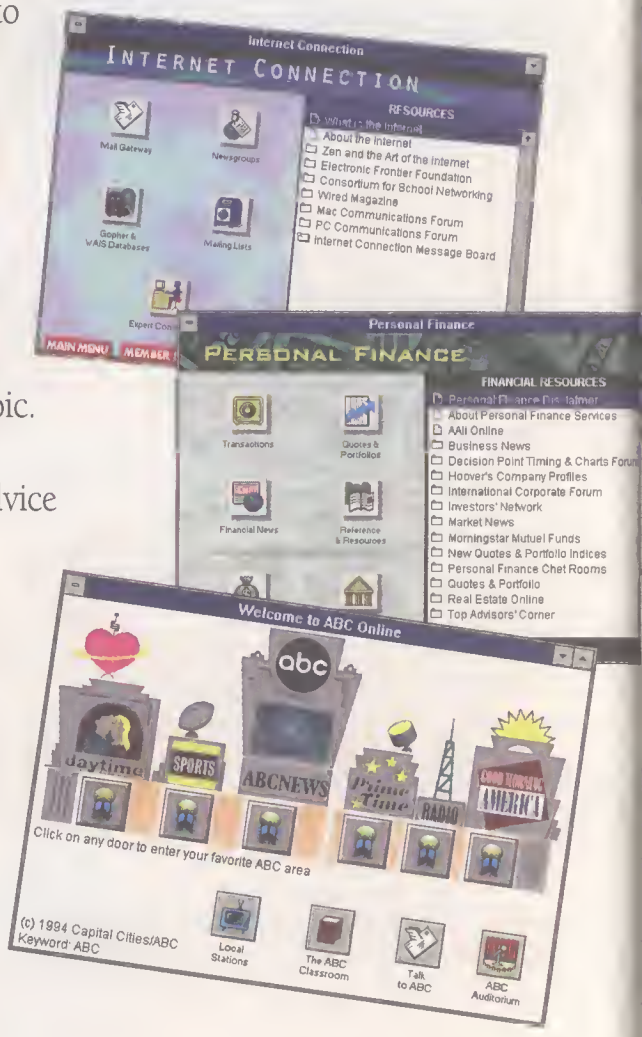

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Get into Shapes A sheet of shapes is indispensable to problem-solving or geometry and spatial-reasoning games.

Use the sorting sets from activity 1 to play simple pattern-matching games. Lay out a simple alternating pattern — such as car, truck, car, truck; or pet, zoo animal, pet, zoo animal — and let your child complete it by choosing what comes next.

Or choose a sound or movement for each type of item in the pattern (car = snap your fingers; truck = stomp your feet). Lay the items on the floor and, as you walk your fingers along the pattern, encourage your child to make the appropriate sound or action. The Bing and Boing game in Millie's Math House (page 126) is an electronic version of the same game.

Geometry and Spatial Reasoning

Geometry is all about the properties and relationships of flat and three-dimensional shapes. It tells your child how to plot out a baseball field in the backyard, build a log bridge, or paint a portrait with natural-looking proportions.

In a drawing program, create an equilateral triangle (all sides of equal length) and copy it several times. Create other shapes, such as hexagons, rhombuses (diamonds), and trapezoids. Do the same with squares and rectangles, matching all sides of the square and two sides of the rectangle to that of your original triangle. Print on heavy paper, sandwich in contact paper, and cut out the shapes to create (quite literally) the building blocks for this game.

Now use these shapes to build symmetrical shapes, combine the smaller shapes to build larger ones, or fill a long rectangular shape with as many (or as few) smaller shapes as you can. Discuss with your child what is happening as the shapes are combined (show her how a rectangle or square is made up of two triangles) and compare the components of each shape (length, width, angles) and how they make the shape unique. When your child helps Loid by making a tangram bridge in Early Math (page 130), she is exercising geometry skills.

Problem Solving

Logical thinking is essential to problem solving. It involves remembering sequences, generating alternative solutions, and predicting outcomes. Tangram puzzles require patience and planning and are best for children older than three years. They are different from simple geometry and spatial-reasoning games because they ask the child to put shapes together in many imaginative ways, all of which are correct.

Use your draw and paint program to divide a large square, as shown in "Tangram Game" at right. Save as a template and print out several on heavy paper. Sandwich each sheet of shapes in contact paper and then cut them out.

The rules of the tangram game are simple: use all pieces to make each figure, and all pieces must lie flat. Now set the goals for the game — make a pattern your child needs to copy, or name a figure such as a horse, person, or bird, and have your child use the shapes to build it. Better still, challenge your child (and yourself) to reconstruct the original square. And even better, load up Millie's Math House and watch as your child uses shapes to build a Mouse House designed by Frank Lloyd Mouse.

Tangram GAME

An ancient Chinese puzzle could be the solution to your child's math problems

Creating the pieces to play the tangram puzzle game is itself an exercise in problem solving, geometry, and shapes. Follow the directions below to create your own tantalizing tangram using Kid Pix.

1 Choose the rectangle tool and make a square by holding down the Shift key as you drag the mouse. Make your square as large as you can.

2 Use the straight-line tool and draw a diagonal line from one corner to the other. Repeat, dividing your square with a large X.

3 Use the Eraser to remove the upper-right portion of the X.

4 Use the straight-line tool to draw a line from the middle of the X straight to the top of the square.

5 At the point where that line meets the outside edge of the square, draw another line at a 45-degree angle to the middle of the right side of the square. (This forms a triangle in the upper-right corner.)

6 Choose the rectangle tool and, starting in the upper-right corner, draw a square extending out from the corner to the edge of the small triangle. (This forms two more triangles.)

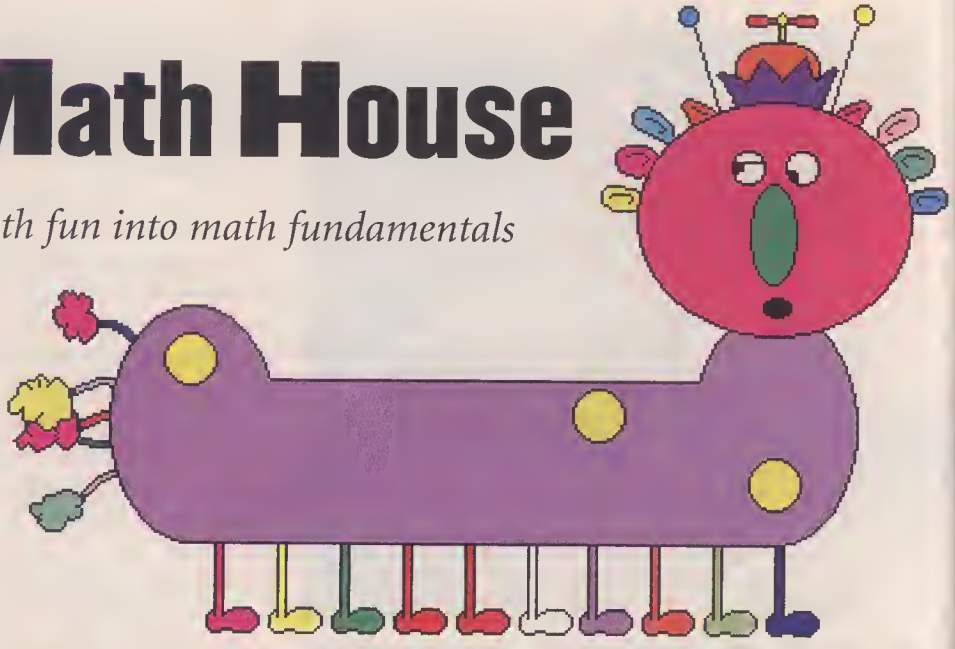
If your finished drawing looks like the picture above, you're ready to print, color, and cut out your puzzle pieces. Time each other while building and naming different figures, or see who can construct the most figures in a given length of time.

Draw and Paint Programs

- Kid Pix Studio, Mac and Windows CD-ROM, $45 street; 800-521-6263 or 415-382-4400
- Flying Colors, Mac and Windows disk or CD-ROM, $40 street; 800-545-7677 or 310-793-0600
- Crayola Art Studio, Mac and Windows disk or CD-ROM, $34 to $49 street; 800-676-3110 or 214-234-1769

Millie's Math House

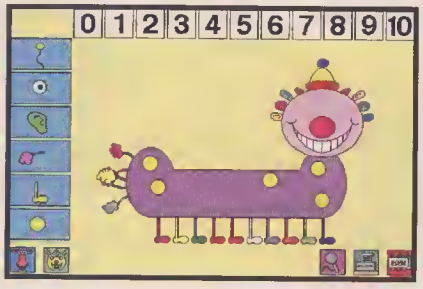
A creative cow turns math fun into math fundamentals



FROM A PARENT'S notebook (where you can track your child's progress in six different math activities) to parental help screens that explain the mathematical principles underlying each game, Millie's Math House is well worth a visit. Millie, your host, is a very creative cow with lots of friends intent on teaching your child about numbers, patterns, geometry, and introductory problem solving. There's a cool caterpillar in Build-A-Bug, Millie's horse friend Harley in Cookie Factory, and a family of friendly mice in Mouse House. Always, there are the voices of children.

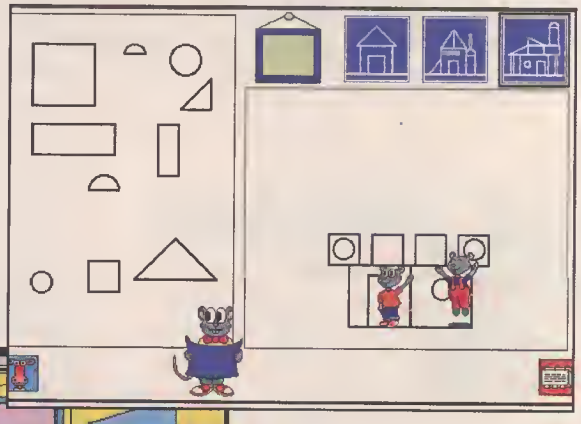
Unlike other commercial early-math programs, Millie's Math House doesn't have multiple levels of difficulty. Instead, parents (or children) can set two different modes of operation — an unguided Explore and Discover mode, or an interactive Question and Answer mode. The Explore and Discover mode lets your child explore the games on her own; Question and Answer mode is directed by a variety of hosts, such as Frank Lloyd Mouse in the Mouse House game.

Millie's Math House, Edmark, 800-362-2890 or 206-556-8400; Mac and Windows disk or CD-ROM, **$35** street; ages 2 to 5.

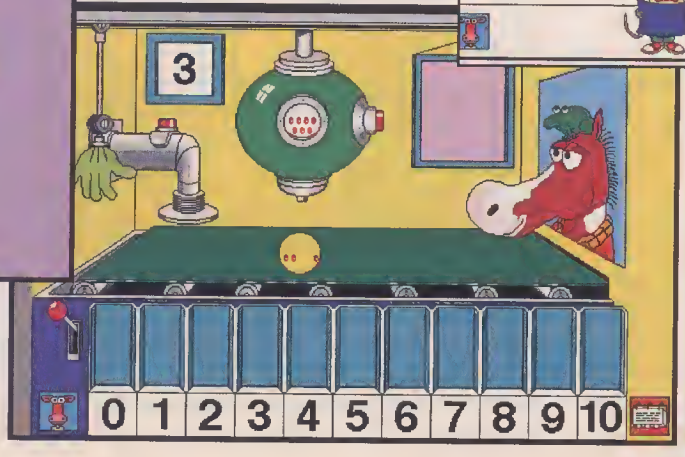


◀ **Build-A-Bug** Your child chooses a number and a buggy body part in this number-recognition and number-sense game. The program speaks the number and the type of body part before stamping that number of parts on a blank bug's body. This reinforces the relationship between numbers and the sets of objects they represent. The Number Machine game also reinforces these skills.

Mouse House ▶
Put together houses from basic geometric shapes. In Question and Answer mode, children are asked to assemble different shapes (square, circle, triangle); in Explore and Discover mode, they build houses based on a blueprint or their own imaginations.



▲ **Bing and Boing** Reinforce audio and visual pattern skills in this game of follow-the-leader. Children complete patterns already begun or create their own.



◀ **Cookie Factory** Harley loves his cookies only just so, and it's your child's job to help solve his delicious dilemma. Your child is prompted to add the appropriate number of jelly beans to Harley's favorite cookies. If she's right, Harley eats the cookie; if she's wrong, his friend Froggy gets the treat.

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Math Ace Jr.

Parents set the depth and difficulty of underwater math challenges

In Math Ace Jr., a guide named Bit-Bot and a colorful submarine filled with fancy controls teach kids exactly what they suspected all along — traditional ("school") math is all wet. There is an abundance of "neat" math activities waiting at the bottom of the ocean, all designed to teach fundamental principles of early math — from numbers and shapes to counting and telling time (using the Captain's Clock on Bit-Bot's submarine). Kids even learn to recognize and add the value of coins in the Aquarium Store.

As children master these activities, they win fish and other undersea creatures to fill their aquarium. To match a child's learning abilities and skills, parents or kids can choose from four difficulty levels for each activity. For example, in Bubble Blaster, the easy level shows a collection of sea shells on the left of the screen and their corresponding numbers on the right. Young children can simply count the entire collection and select the bubble with the correct answer as it floats by. At the hardest level, the sea shells do not appear, the problems advance to include multiplication of numbers 1 to 9, and the bubbles with the answers float by much faster.

Math Ace Jr., Sanctuary Woods, 415-286-6110; Mac and Windows disk, **$34.95** street, or CD-ROM, **$39.95** street; ages 4 to 8.

▲ **Seal Beach** Kids toss balls to seals on a beach who represent place values, starting with ones on the far right and going up to 100,000s on the far left.

▲ **Bubble Blaster** Kids choose the answer to basic math equations as it floats up from the bottom of the ocean. When they answer problems correctly, they're awarded a fish for their aquarium. If they answer incorrectly, the bubble pops and they are prompted to try again.

◀ **Fish Calculator** When kids type in a number on the Fish Calculator, that number of fish appears. As they add fish, additional ones appear. This simple game shows children graphically that when you add or multiply things, you get a larger collection, and when you subtract or divide them, you get a smaller one.

Oyster Park ▶ With different numbers of crabs on each side of the oyster-shell scale, kids practice addition and subtraction — adding crabs and taking them away — to make the two sides balance. As the games get harder, the operations get more complex (including multiplication), and the possibility of counting objects disappears.

Shape Hunt Kids shoot down shapes and numbers that emerge from the deep according to patterns they see at the bottom of the screen. ▶

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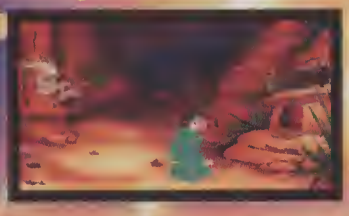

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Early Math

Numbers and patterns are easy when your child learns with Loid

WHILE MANY early-math programs have printed manuals that explain what the activities teach and how they are trying to do it, Early Math has informative parent screens built right into the program.

Early Math is a great introduction to all the fundamental early-math concepts, especially numbers and patterns. In four activities hosted by an animated alien named Loid, Early Math teaches shapes, patterns, quantities, counting, and addition and subtraction. Loid not only provides directions for the games, he also provides encouragement and constructive feedback — an important part of any early-math program.

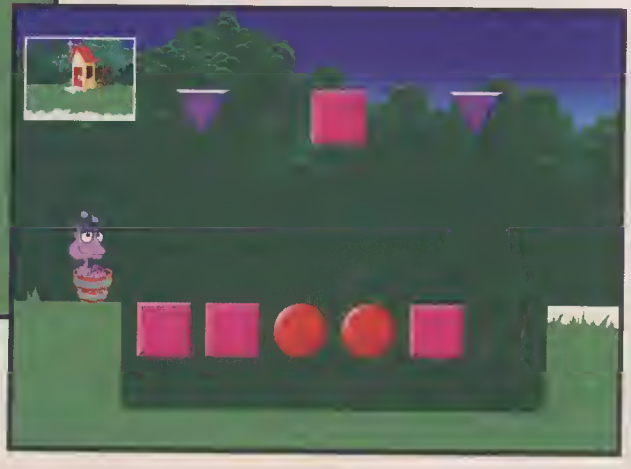
Early Math, Sierra On-Line, 800-757-7707 or 206-649-9800; Mac and Windows disk, **$35.95,** CD-ROM, **$39.95;** ages 3 to 6.

▲ **Tangram Bridge** Tangrams are geometric puzzles (Tetris is an example of a tangram game). In this game, kids build a bridge to help Loid cross a huge pothole. By picking out the correct geometric shapes and steering and rotating them, kids begin to pick up basic spatial and geometric concepts.

▲ **Fishtank** In the Fishtank game, kids learn addition and subtraction by determining how much food to feed a tankful of pet fish. In making sure all the fish are fed, kids also begin to learn about division.

▲ **Counting Sheep** Kids learn numbers (symbols and words) and basic addition in the Counting Sheep activity. They have to identify the correct number of sheep on a number line. They also learn subtraction by making the sheep disappear one at a time.

▼ **Pattern Bridge** In the Pattern Bridge, kids learn to complete patterns using shapes, letters, and numbers. The game also requires children to use logic and so begins to introduce them to higher-level problem solving. Level one uses just shapes, level two uses letters, level three uses numbers, and level four uses all three.



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▲ Calliope Counting Game In this game, kids build their own songs by counting the notes. By hearing the different sounds and seeing where the numbers lie, kids also begin to recognize numbers and the sets they represent.

◀ Sea Lion Show Here children practice basic addition and subtraction. Kids will also begin to recognize numerical patterns as they increase and decrease numbers by the same amount.

▼ Tightrope Show Kids match numbers with groups of objects. At higher levels, they match the numbers with math expressions. Kids start to recognize equalities, and the game shows them how numbers are expressed in different ways.

Math Rabbit

A trip to the circus means math fun for your kids

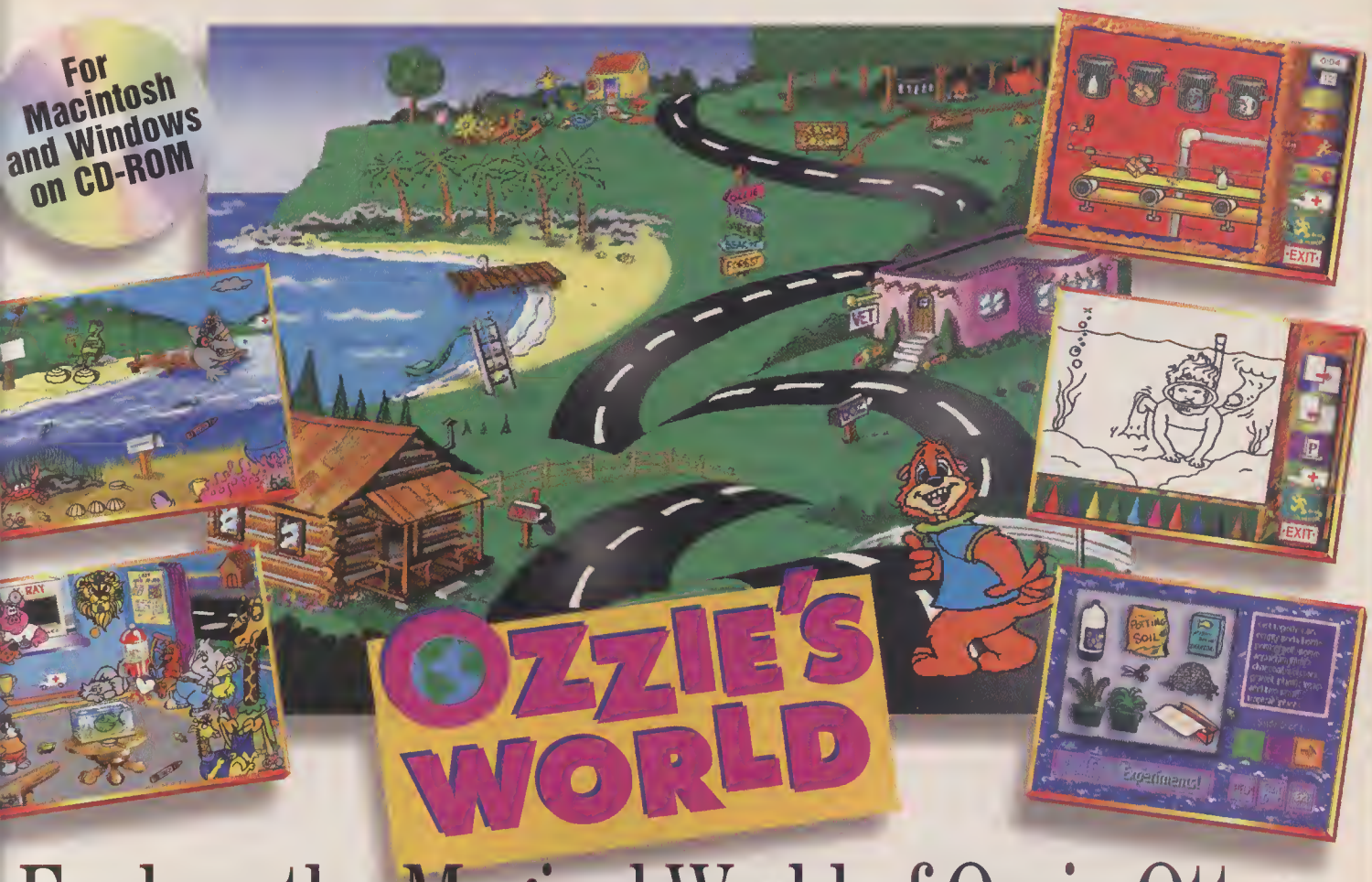
MATH RABBIT, which rated tops when we FamilyTested early-math programs (see September/October 1994 *FamilyPC*), uses a trip to the circus to teach counting, number recognition, and basic addition and subtraction. It rated a 9 from our family testers for educational value and a 10 on replay value, so kids will come back to it again and again.

Each activity has three levels of difficulty, so kids can step up the challenge using bigger numbers or more complex equations. In the Balloon Matching Game, Tightrope Show, and Sea Lion Show, parents can even change the mix of math problems, choosing just addition, subtraction, or multiplication, or a mixed bag. Math Rabbit has an activity that teaches spatial concepts, but it's most useful in stressing numerical skills.

Math Rabbit, The Learning Company, 800-852-2255 or 510-792-2101; Mac and Windows CD-ROM, **$50** street, disk, **$45** street; DOS disk, **$35** street; ages 3 to 6.

Balloon Matching Game ▶ Test memory and concentration by matching numbers to a collection of objects. Kids begin to see that numbers represent a set of objects. They can change the game so they match numbers to sets or match sets to sets (with different or identical layouts).

For Macintosh and Windows on CD-ROM



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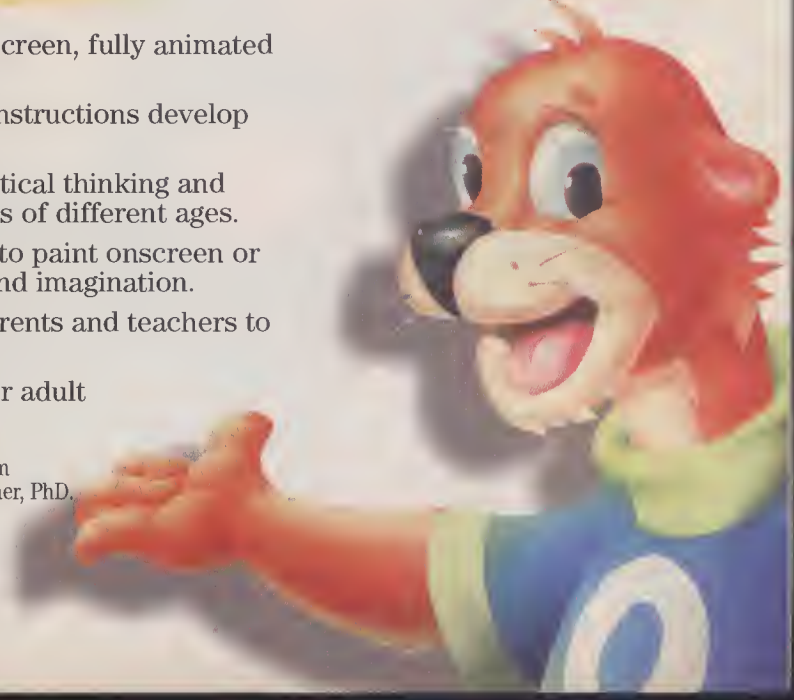
Join ***Ozzie Otter*** on a magical, animated, earth-friendly exploration. It's a wonderfully engaging environment where animals talk and share their stories, and where puzzles, games and fun scientific activities are hidden around every corner. Kids will be enchanted as they learn about science and things that can be done to keep the world clean.

FEATURES

For Ages 3 to 8

- **5 ENVIRONMENTS** to visit, each with an onscreen, fully animated dialogue, encourage interactive play.
- **40 SCIENCE ACTIVITIES** with step-by-step instructions develop deductive reasoning and thinking skills.
- **LOTS OF GAMES AND PUZZLES** build critical thinking and memorization with 3 skill levels to meet the needs of different ages.
- **OZZIE'S COLORING BOOK** — 40 pictures to paint onscreen or print out and color by hand to enrich creativity and imagination.
- **DREAMSTARTERS** — intelligent stories for parents and teachers to read with kids.
- **PARENT/TEACHER GUIDE** provides tools for adult participation in the learning process.



Ozzie's World is based on *Earth Child*, a best-selling book from Council Oak Books written by Kathryn Sheehan and Mary Waidner, PhD.

Digital Impact
6506 South Lewis Avenue
Suite 250
Tulsa Oklahoma 74136

OZZIE'S WORLD
1-800-775-4232
(918) 742-2022

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Counting with The Count (and friends)

Multiply math skills with a visit to Sesame Street or Hickory's Magic Meadow

FROM OLD FRIENDS Big Bird, Elmo, and Count von Count, to new ones like Hickory the mouse, kid-friendly characters in all shapes and sizes teach about the fundamentals of early math — counting, numbers, and, well, shapes and sizes.

Sesame Street: Numbers

Aimed at kids ages three to six, this program has four activities that stress counting, number recognition, basic math, classification, and the concepts of near and far.

In I've Got Your Number, The Count has hidden a bat behind one of the numbers on the screen and your child needs to find it. The Count gives clues that require kids to use addition and subtraction skills. For example, if he makes a building with ten blocks and two blocks fall off, how many blocks are left? (Your child can count them.)

In The Hidden Paper Clip Game, Ernie has hidden Bert's paper-clip collection behind objects in a room and your child has to follow clues to find them. In one case, Ernie says the paper clips are hidden behind toys, things that fly, and things that are blue. If your child looks behind a toy, she'll find a paper clip; if she looks behind the blue toy airplane, she'll find three.

Sesame Street: Numbers also has Big Bird's Near and Far Game, as well as Elmo's Present Game, in which kids explore Sesame Street and click on the appropriate number of objects to fill Elmo's package. When they're done, Elmo counts them one by one.

Sesame Street: Numbers, EA*Kids, 800-245-4525 or 415-571-7171; Mac and Windows CD-ROM, **$49.95;** ages 3 to 6.

Hickory and Me

Numbers are the foundation of early math, and 1-2-3 With Hickory and Me has fun games that examine every aspect of them — counting, numerical order, addition, and subtraction.

Guided by Hickory the mouse, your child visits Magic Meadow and counts critters to figure out how much food he'll need to feed them. Or he can pick a number, and that number of animals will appear. In Number Maze, kids pick out numbers from a jumble of frogs, numbers, and lily pads. FPC

1-2-3 with Hickory and Me, Step Ahead Software, 800-236-7123 or 414-544-1661; Mac and Windows disk, **$19.95;** ages 3 to 6.

▲ **Count & Co.** Open Sesame Street: Numbers and join in four fun early-math games and activities.

Trickory Hickory You ▶ can challenge your child to complete number sequences in the Number Maze game.

Countdown TO MATH SKILLS

There are no soft and fuzzy characters in CountDown, but the three math games — Leftovers, Guestimation, and Nimbles — are fun just the same.

In Leftovers, your child looks at a pile of objects (noodles, marbles, or pennies) and guesses how many groups of 5, 10, or 30 to remove to clean up the pile. The Guestimation game is similar, but here your child attempts to guess the exact number of objects. Once your child has guessed a number, the program takes away that number of objects.

The Nimbles game is different: your child and a partner strategize to see who will be the last holding an object. On each turn, players take away up to three objects, so they have to think ahead to win.

CountDown, Voyager, 800-446-2001 or 914-591-5500; Mac and Windows CD-ROM, **$29.95**; ages 4 to 10.

Judy Brewer *is a former teacher and homeschooler in Hampden, Massachusetts.*

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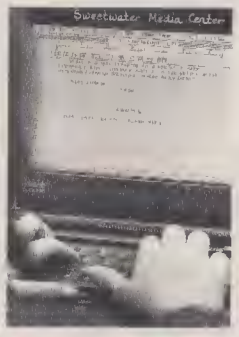
CLASSROOMS GO GLOBAL

Learning is more vivid when kids go online to collaborate with faraway peers and adults

BY JEAN SHIELDS

GLORIA STUHLMILLER's third-graders knew the facts about farms. They'd studied pictures, heard stories, and compared different kinds of farms. But Stuhlmiller felt something was missing. The kids lived mostly in a suburb of Rochester, New York, and they lacked a sense of how farm life differed from the life they knew.



The school media specialist, Lynn Willard, suggested using the media center's computer to tap into the Prodigy online service and connect the kids to real farmers. She typed in a "Farmers Wanted" notice and posted it on Prodigy's Travel Forum. That same day, the class started to receive responses from farmers all over the country describing their day-to-day operations, what they liked about their work, and what was hard about it. And over the next few weeks, by spending about twenty minutes a day reading and answering notes, the class formed a special friendship with a real-life farmer Brown (Mrs. Brown, to be exact) in Pennsylvania, who had a knack for getting the kids excited. Mrs. Brown wrote to share moments of wonder when a calf was born, and hardship when some of the crops failed. "For kids in a suburban school like this one, going online really brought farming to life," Willard said.

In classrooms across the country, educators are discovering the same thing: modem-equipped computers connected to phone lines offer a way to access research that's more up-to-date than anything in print. They also allow kids to consult with and get firsthand information from experts and to collaborate with faraway partners. Students learn that the world is available to them — and that the computer can span the distances between themselves and others.

While your third-grader might come home and announce that her class is consulting online with a team of researchers bicycling through Central

Illustration by Stephen Durke; Interior photographs by Greg Foster

America, chances are equally good that your school is just starting to think about including online work in its curriculum.

If your child doesn't have telecommunications access at school, you can tap into online learning possibilities at home or help your school get online. This article will introduce you to the best in-school online projects *FamilyPC* has heard about, describe behind-the-scenes work teachers do (and parents can borrow from) before the kids log on, explore the possible pitfalls of going online, and give you all the information you need to serve as your child's cyberspace copilot.

What's the Educational Benefit of Going Online?

In America's best classrooms — whether computer-equipped or not — kids learn to collaborate with others, to consult firsthand sources, and to work in teams. Disciplines that used to be studied separately are integrated into compelling real-world units. For instance, a science class might simulate becoming an environmental activist group for a few weeks, using a math lesson to measure rainfall and analyze the water's quality and making a writing assignment out of drafting a letter to their local legislature. The same class with online connections can find collaborators in other classrooms — statewide or nationwide — and can create a more far-reaching, in-depth research report.

Preparing to go online with kids is a lot like planning a trip — adults need to plot out the trip's course and figure out the best way to get straight to the good stuff before venturing out with the kids. But teachers who've gone online will tell you that the results are worth it. The kids get a sense of working collaboratively, not only with local peers, but with a larger community. They learn research techniques and how to write for specific audiences, all in a real-world setting.

"These projects get students truly involved in what they learn and how they learn it," says Kay Abernathy, a Christa McAuliffe fellow and technology coordinator in Texas. "Parents are telling me they haven't seen their kids this excited about school in ages, and I can tell you the same thing about our teachers. It rejuvenates them."

All Aboard: A Day Trip to Antarctica

One of the most popular ways educators use telecommunications is to take their classes on "virtual field trips." No buses needed, no parent chaperones — just a computer and modem can get a class from Strafford, New Hampshire, to the South Pole and back in time for the three-o'clock bell.

Virtual field trips range from simple electronic-mail exchanges to elaborate projects involving video conferencing, offline research, even collaborative decision making about how an adventure should proceed.

To enhance a unit on the continents, Diane St. Germain, a second-grade teacher in Strafford, dipped into the School to

THREE Things You Can Do TO GET YOUR SCHOOL ONLINE

1 Go online for resources. Both Prodigy and America Online have sections that announce grants for funding technology purchases and projects. Other resources include copies of successful technology plans written by school districts nationwide. Bulletin boards, forums, and scheduled chats are good places to get questions answered and forge partnerships.

2 Contact CoSN. The Consortium for School Networking, an advocacy group for K-12 networking, maintains online areas on America Online (Keyword **ESH**, search CoSN) and the Internet (info@cosn.org), offering users information related to getting schools connected. As a member, you can access a range of discussion forums, including a parents' discussion group. Call 202-466-6296 for details.

3 Donate a modem. The cost of a decent (14.4-kbps) modem has come down quite dramatically, to about $100, making this an attainable fund-raising goal for PTAs and other parent organizations. Remember that there also will be costs affiliated with installing and maintaining the phone line that connects your computer(s) to the outside world. Research those costs and include those expenses in your fund-raising goals. Once the school community starts to use this new technology, it will be much easier to press for more. It will also demonstrate to school administrators that you want telecommunications to be part of your child's school experience.

Break Down Barriers Online contact is beneficial to hearing-impaired children, as it helps kids bypass communication barriers. Here, Tony helps Marie add her pic to e-mail.

School: Quick Projects folder of America Online's Electronic Schoolhouse to link her class to the world. There she found a Classroom on Ice folder — a virtual field trip that connects kids with researchers stationed in Antarctica.

To start her kids thinking about Antarctica, Ms. St. Germain read messages to her class from a photographer/writer named Neelon Crawford. They brainstormed a list of questions, including "What are your favorite animals?" and "What do you take pictures of and write about?" Mr. Crawford's responses brought the stark beauty of Antarctica to life for the children, and even the most reluctant writers wanted to send e-mail in hopes of getting a message back.

NASA Space Challenge, sponsored by Prodigy, allowed kids to tap into the space shuttle Atlantis's mission last October. Prodigy users had access to mission updates direct from NASA and offline activities that let kids explore the same topics as mission astronauts were working on — what gases make up the earth's atmosphere, for instance.

Browsers could find articles that examined different facets of space travel, such as space suits and how the body adapts to life in space. There were even opportunities to ask questions of NASA scientists. Mrs. Rae Luken's fifth-grade class from Rochester, New York, took advantage of this to find out what it's like to see an asteroid firsthand and whether or not weightlessness is as much fun as it appears to be.

Virtual field trips take a class to the South Pole and back by three o'clock.

MayaQuest, currently under way on Prodigy, lets students actually determine where a team of researchers bicycling through Central America will go as they explore the demise of the Maya Indians' culture. Each week of the expedition (which at press time was scheduled to begin in February), students do research on the Maya and explore different theories regarding the collapse of their civilization. Students then vote online on which places to explore, artifacts to examine, and which experts to consult. (See "Roadmap to the Best Projects" on page 140 for additional information about how to get there.)

You can supplement what your child is studying at school by going online exploring together. Or pursue extracurricular interests online — travel, sports, and personal interests of all kinds have their own areas on the leading commercial online services. Take cues from the teachers we talked to: preview online areas so you know some shortcuts to the good stuff.

Tracking Friends Reading postcards from online friends and (above right) pinpointing where each came from on a map.

Chatting It Up

Computer chat means sending messages to someone else who is online at the same time. I type something in, it appears simultaneously on your screen, and you type in a response.

Chat is a component of many kinds of projects. For example, in February, the Scholastic Network offered a wide variety of activities based on a presidents theme. The living U.S. presidents were invited to participate in an online chat session, offering their first-person views of White House life, and students chatted with historians and journalists in special forums set up for the occasion.

Foreign language teachers love chat because students don't want to look dumb to "real people." Using the foreign language forums on CompuServe, Gene Gerber's French

INTERNET Adventures

If your child's school is online, it's likely to be connected to the Internet, a vast internetwork of mostly educational computers (see "The Family Internet Primer," *FamilyPC*, November/December, page 234) scattered around the world. Many teachers have begun to take advantage of the vast amount of information stored on those computers by using new, easier-to-use (but more difficult to set up) graphical interfaces like Mosaic.

Caroline McCullen, a teacher in Orlando, Florida, built Midlink, an online magazine that enables her students to share their creative work with the world. "It seemed like a shame that all this wonderful work was just sitting here, with no one but ourselves to appreciate it."

Mosaic lets Internet users jump from documents to images, sound, text, and even short video clips with just a click of the mouse. Together with a partner familiar with the new technology, McCullen was able to translate the students' stories and graphics into hypertext documents — electronic pages with "hot links" leading to other information on the Internet.

Parents interested in investigating the Internet with their children can tap into Internet resources on the various commercial online services — America Online, CompuServe, Genie, and Delphi. America Online has announced plans to expand its service to offer a graphical Internet front end like Mosaic. Look for it later this year.

students in Ohio upload their work and invite commentary from native speakers. And Gerber connects his students with counterparts in Geneva, Switzerland, for online cultural exchanges — all conducted in French. Going online demonstrates what Gerber wants his students to know: a foreign language is more than grammar — it's a key to communication.

Mr. Gerber suggests that parents interested in setting up cross-cultural exchanges for their children track down foreign language forums and other places where an international perspective is likely to be found, such as discussions of world news or travel forums. CompuServe is the most international of the commercial services, but the Foreign Language Forum and the Travel Forum are probably best reserved for parents with children who read well (in English) and have a good grip on the basics of the foreign language they want to use. After parents sift through responses from people willing to chat, decide on likely candidates, and set up a mutually convenient time to chat, kids can get involved with the conversational fun. Or to slow conversations down, you may want simply to exchange e-mail for the time being.

Making New Friends Erin uses a notebook computer to write to an online pen pal while her teacher looks on.

Collaborations

Going online allows educators and students to work together in new ways. Students in many different locations can join forces to create one giant collaborative product. For example, the sponsors of Taking Stock, a stock market simulation, divide participating fifth-through-twelfth-grade students into investment teams that meet online to develop portfolios, share research, and invest "virtual cash" earned along the way. Or teachers may choose to have groups of their own students work together to create a unique collaborative product and send it out for the world to see.

ScrapBook USA, which recently won Connecticut's Celebration of Excellence award, lets students display writing for others around the country. In America Online's Electronic Schoolhouse, teachers can participate in a formal swap, lasting eight weeks, or informally add their students' work to the collection. Topics have included sharing family recipes and essays on what makes their region of the country special.

Telecommunicating across Generations

Another reason online projects earn high points with teachers is that it's easy for students to connect across grades, and even ages.

For shy kids, the relative anonymity of the computer can be a real boon in making

CHAT CAVEAT

Parents need to be aware that chat is a double-edged sword, since it essentially is talking to complete strangers. *FamilyPC* recommends that parents be present for online chats until their children are comfortable and habitually adhere to these ground rules:

- Don't give out real names, addresses, or phone numbers.
- Never say you're home alone.
- Don't set up online meetings on your own. Only do so in the company of a parent-approved adult.
- If your child is "chatting" at school, check with teachers to be sure that similar guidelines are in place.

For further details, see the *FamilyPC* Online Safety Tip on page 86 of the January/February issue.

THE HOME FRONT: WHAT YOU CAN DO

Whether or not you've "gotten wired" in your home, there are ways for you as a parent to support your child's participation in online projects.

- **Monitor where your child goes.** Many commercial services have features that let you restrict access to some areas. Look into this and set the parameters you deem appropriate.
- **Decide on an online allowance.** If you are using online services at home, set up a budget and show your child how to keep track of how much time has elapsed (you know that old saying about time and fun).
- **Offer feedback.** Take time to reply to messages or to work you see online. Compliments and acknowledgment provide a real boost to the work's creator.
- **Let the world know your area of expertise.** Piano tuning, neurophysics, how to throw the perfect curveball — you just might be the person who can answer the burning question of a faraway class.
- **Tie into what your kids are studying.** Find out what's going on at school and build on it. Online, look for forums that discuss topics and would allow information exchanges.
- **Help the teacher.** If you have time available, volunteer to post student work online, or follow the goings-on of a forum dedicated to educational issues of interest to your child's teacher. When you find comments that seem interesting, print them out and share them with your child's school.
- **Help your child put the information in a context.** You can help your child think critically about what's out there. Point out places where you see bias and inaccuracy. This may be the most important way to help your child gain a balanced perspective and a healthy skepticism in the information age.

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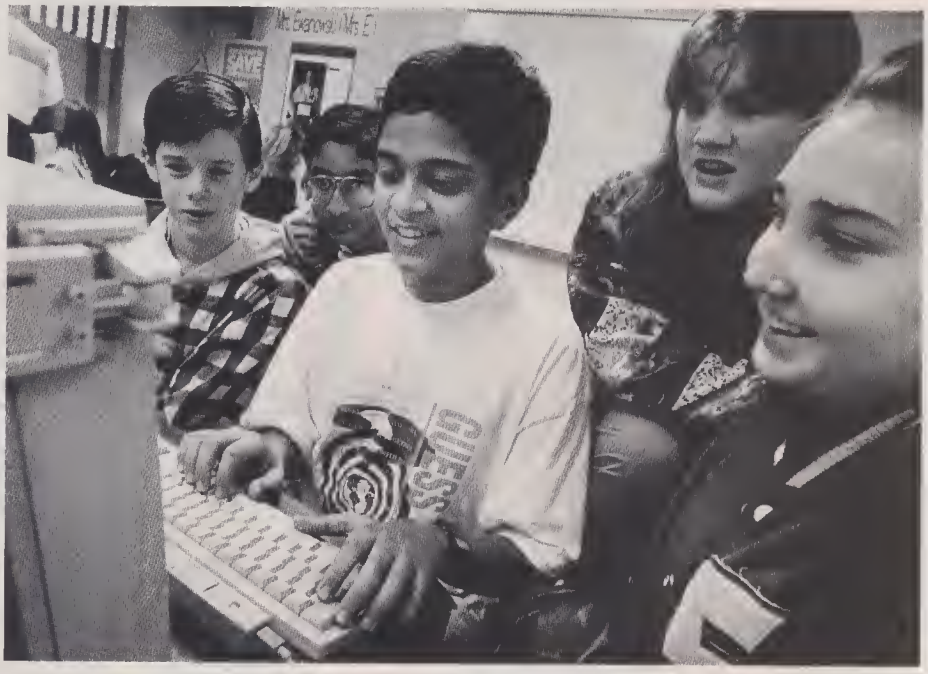
these projects work. An eighth-grade student who started the year as every teacher's nightmare — sullen, belligerent, unable to focus on the work — became, in her teacher's words, "a real turn-around child" when she connected via online key pals (the electronic equivalent of pen pals) to a man living in North Carolina.

As they got to know each other, he asked her about her family. "I don't have a mother," she wrote him. When he asked what she meant by this, out poured a story that helped explain her defiant behavior. Her father had died when she was young, her mother was serving time in jail, and her siblings had been dispersed to foster homes far from her. Her teacher, upon seeing this message, asked why the girl had never shared any of this. "I just couldn't," she said. But the computer, combined with a sensitive older person willing to draw her out, enabled her to speak the unspeakable.

Leni Donlan, a teacher in California, has worked with intergenerational telecommunications projects in several ways. She teamed up a fifth-grade class with a class of high school seniors anticipating graduation. The fifth-graders posed the challenging question, "What's it like to be seventeen?" While the teenagers came up with poems and essays to answer, the fifth-graders wrote their own stories to remind the older kids of the pleasures and hardships of being ten.

Donlan also set up key-pal exchanges with SeniorNet, a group of senior citizens online. She created a new folder in the Learning & Reference section of America Online, inviting elders to write to her students sharing their perspectives and stories. The response was tremendous, and the relationships became quite warm. "Connecting the kids with the senior citizens brought out the tenderhearted side of the kids, and it helped their writing, too," she said.

Your children can use online services to contact relatives who will enjoy sharing stories of growing up in a very different world, or to work with several relatives to create a family history.



Group Chat Derrick, Varun, Jaymen, Stephanie, and Cathryn chat with other students. Photos for this article were taken at Sweetwater Middle School, Lawrenceville, Georgia.

Go Online at Home, Too

At home you have the advantage of offering your child much more online interaction than he or she is likely to get at school. Most schools that are currently online have the modem hooked up to one or two computers, often in a central place such as the media center. Kids get just a peek at the possibilities, so they will appreciate being able to explore online resources in greater depth at home.

Online services have a great deal to offer your child as he or she goes through school. They provide new ways to do research, to work with others, and to connect to people with common interests. The work you do to make these resources available to your child will pay off in higher motivation and an expanded view of the world. FPC

Kids appreciate being able to explore online resources in more depth at home.

Jean Shields *is associate editor of* Technology and Learning *magazine and also writes on educational issues for a variety of magazines.*

ROAD MAP TO THE BEST PROJECTS TO TAP INTO

Here's how to find the projects you just read about.

AMERICA ONLINE
(For all: Keyword ESH)

- **Intergenerational Links:** to connect your child with elders around the country.
- **Classroom on Ice:** the virtual field trip to Antarctica (School to School: Quick Projects)
- **Taking Stock:** the stock market simulation (School to School: Projects)
- **ScrapBook USA:** the online literary magazine (School to School: Projects)
- **The Scholastic Forum/Network**

COMPUSERVE

- **Foreign language forums:** Go Forums, Education Forum

PRODIGY

- **MayaQuest:** bicyclists in Central America. Jump **MayaQuest**
- **Travel forums:** Jump **Travel**
- **To find other projects:** Jump **Learning Adventures**

Jeffrey Lawrence and his daughter Amelia, Pacifica, California

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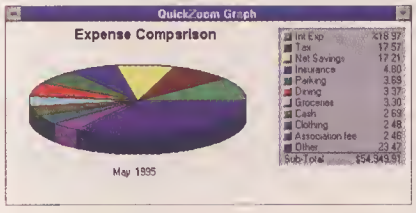

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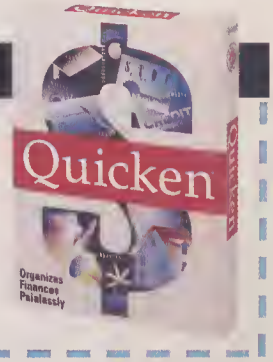


QUICKEN. PAINLESSLY ORGANIZES FINANCES.

Remodeling your Home

Let these interior decorating programs and your PC provide the foundation for your dream house

AS SOON AS YOU MOVE INTO a home, do you start dreaming about ways to improve it? Adding a master bathroom here, expanding the kitchen there, rearranging the furniture — remodeling and redecorating — go hand-in-hand with owning a house. And using an interior decorating program on your computer, you can see those dreams come alive in 3-D on your screen. Then, when you give an architect or contractor the go-ahead, your computer can give you tips on how the work should be done, showing what you will need and what it will cost — down to the last nail — and providing a detailed, accurate plan.

We've just finished using a handful of these interior decorating programs to help with two projects at our house, designing a new master bathroom and expanding our old kitchen by opening up the wall to the dining room. We

By Jonathan and Lisa Price

Lightworks Photographic

worked with many programs (thirteen to be exact) that say they're easy to use. But unfortunately, we had to plod through many clunky icons, the Cartesian coordinate system, and furniture symbols that looked worse than what our six-year-old son, Noah, can draw. On the brighter side, we found some great programs that are easy to use and don't require you to have a degree in architecture. Four of them — 3D Home Architect, Expert Home Design, Design Your Own Home Interiors, and Visio Home — are described and rated here and in the table on page 148.

Drawing an Accurate Floor Plan

Before we spoke to a contractor, we wanted to sketch out our ideas for the kitchen and bathroom. Penciling our ideas on graph paper was fine until we started erasing and redrawing a few times. We ended up with a crumpled mess and no easy way to confirm that we'd gotten all the measurements right. To be able to tell whether that new stove would fit, or to know how many electrical outlets to purchase, we had to start with a more precise plan. Remodeling software quickly gave us clean and accurate maps of walls, windows, outlets, and even plumbing lines for our kitchen and bathroom.

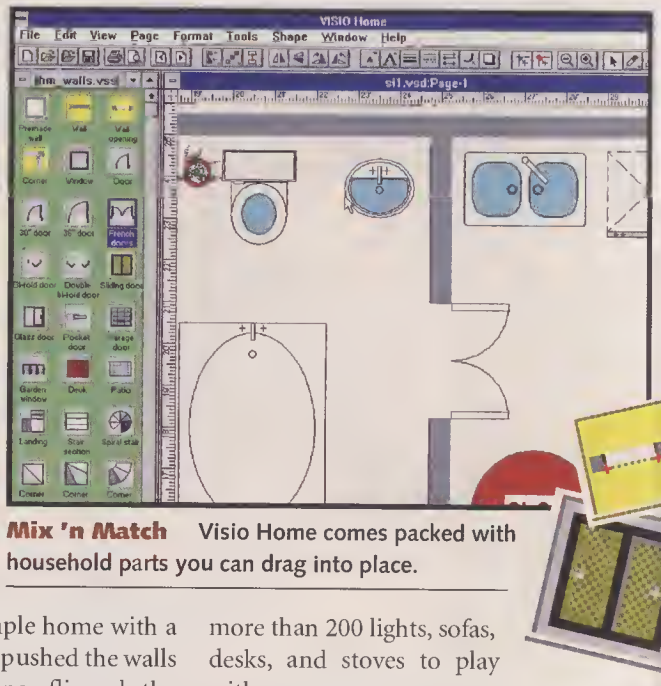
To start designing our expanded kitchen, we browsed through the 3D Home Architect manual and picked out one of the dozens of floor plans that come with the package. We found these templates to be great for generating ideas. None of the templates were exactly what we were looking for, but they let you make changes easily. Just by clicking and dragging, we adjusted the length and width of the walls to match our current kitchen, and then we punched a hole in one wall and extended the dining room to match our own.

We knew which tool to use to draw new walls, because whatever icon you point to displays its name. The program made sure all our walls came out straight, at ninety degrees, not slightly tilted — though you can do that, too. We asked the program to show us the external dimensions, and in a flash, a complete set of lines and arrows appeared, showing how long each wall, jog, and door was. The plan looked as though an architect had drawn it.

For more ideas, we browsed through the more than fifty room and home designs in Expert Software's Home Design Series CD-ROM (you can take video tours of many of these houses, too), found a simple home with a kitchen like ours, quickly pushed the walls around, took dimensions, flipped the stove, and generally adapted the plan to our situation. We wondered whether we would need to do any rewiring, so we added another layer, like an acetate sheet on top of the main drawing, and put in the electrical lines. We saw that we would have to close off a line for an outlet we intended to remove, but other than that, we could get by with the existing 220- and 110-volt lines. Then we hid that layer, so we could admire the new appliances.

> The fact that you can keep on making changes to the design is what makes these programs so useful.

Starting with these architect-supplied plans means you're likely to emerge with a design that doesn't make you duck, or squeeze past a too-wide cabinet. But the quantity and quality of the plans vary. Home Design has the most drawings, but when it focuses on a whole house, it sometimes slights the kitchen or bathrooms. 3D Home Architect has fewer but more thoughtful plans. Visio Home is a general-use drawing program for creating everything from floor plans to football plays; it has empty shells with lots of appliances and shelves to insert. Design Your Own Home offers more than two dozen individual rooms and work areas, fully worked out, plus more than 200 lights, sofas, desks, and stoves to play with.



Mix 'n Match Visio Home comes packed with household parts you can drag into place.

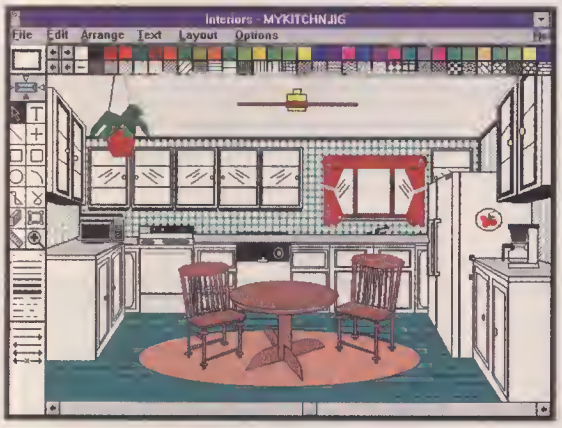
Starting from Scratch

We decided that because the master bathroom would be an entirely new room, we would try creating its plans from scratch. We opened Visio Home, and, wondering which tool did what, ran the pointer over the icons, popping up labels. Seizing the wall tool, we drew an outside wall first — the one behind our current tiny bathroom, where the pipes would come out. Then, next to that, we sketched the wall of our bedroom. Finally, to complete the bathroom, we dropped in two brand-new outside walls. We laid down a tile floor in one sweep and added dimension lines. Total time for this roughly accurate drawing: four minutes.

Visio Home gives you lots of prepared shapes, grouped in what it calls *stencils*. We chose the Home Bathroom stencil and, when that appeared, dragged icons for a toilet, sink, cabinet, and tub into the new room. The tub didn't look big enough, so gauging its size by the ruler above, we dragged one handle until it became a Jacuzzi.

To get into the new bathroom from the house, we had to carve out a door. We dragged over a door unit and dropped it into our bedroom wall. The program drew the curving sweep and the door itself as it came to rest inside the bedroom. Neat, but wrong. Luckily, the program lets you adjust any image at any time. We rotated the door to the left, and in a moment, it opened into the bathroom.

To label the Jacuzzi, we just clicked on it with the text tool and typed; Visio Home automatically centered the text over the object and made it large enough to read. To remind ourselves what was next to this bathroom, we rummaged through some other stencils and grabbed a prepared callout (a label with a line pointing to whatever object you're describing) and typed "Our Bedroom" and "Kids' Bathroom." From the map stencil we even got a compass arrow, changed the color, and rotated it to show the direction of true north. Sitting down in the new bathroom, we'll be able to see the northern lights.



Country Kitchen Design Your Own Home Interiors lets you not only place objects but apply color, too.

We added windows, electrical outlets, and plumbing in the same way. The result was a plan that we could talk over with our contractor, and a printed set of dimensions we could use to tell if the antique sink we'd bought in a yard sale would actually fit. (It did.) This plan was sharp, clean, and precise, and we could print out new copies of it whenever we needed to.

All four programs let you design from the ground up, relying on tools that generate walls or windows, or libraries full of predrawn images.

Manipulating the Pieces

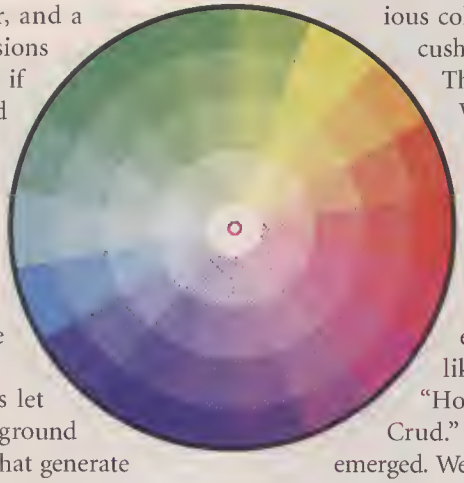
Of course, we couldn't leave the kitchen alone. Using 3D Home Architect we moved the window back and forth, from the sink to the counter, wondering what we might see coming in the door to the kitchen. We moved one full-size cabinet around the perimeter, rotated it, resized it, cut it in half, and restored it. We even shaded it with a pattern.

The fact that you can keep on making changes to the design is what makes these programs so useful. You set up a room one way, shake your head, and drag everything around, homing in on what you really like. Shuffling the cabinet around took only a few minutes, because it's a coherent object, not just a set of dots. We didn't have to create it in the first place, and when we modified it, we didn't damage anything, as we would have in a typical paint program. Our cabinet survived our manipulations — pixels, patterns, and all.

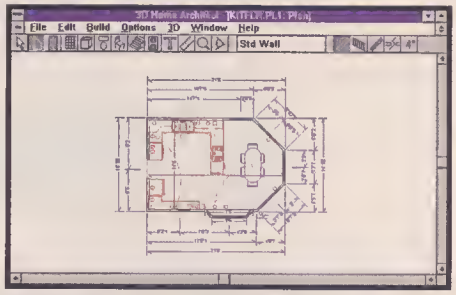
Mixing Colors

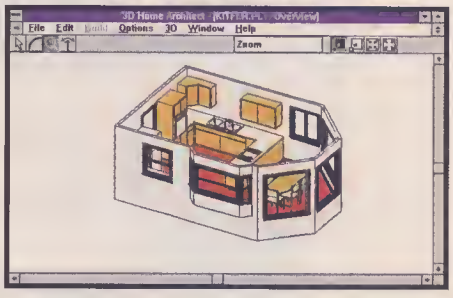
Once we'd settled where to place the island between our old kitchen and the new dining room, we started to think about color. We'd found a beautiful Navajo rug that we wanted to place on the dining-room wall, which is painted an off-white, and we wondered what colors might go well with the rug's earthy tone, the brick floor, and the exposed pine beams in the ceiling.

With Design Your Own Home Interiors, we used a color wheel to try out various colors for the bar-stool cushions and countertop. The color wheel is great. We could whip up just about any color imaginable. We were even able to create our own color palette and store it in the palette library to use later. We saved each version with names like "Brown Leather," "Hopi Style," and "Early Crud." Slowly some themes emerged. We were tending toward neutral colors in the furniture, with colorful accents on the floor and walls.



The Expert Home Design CD-ROM lets you pick colors from a wheel or palette to modify the patterns, lines, and even gradients available. We were able to play with a broad range of colors in 3D Home Architect, too. Visio Home doesn't offer quite so many colors, but it does give you control over a wide variety of patterns, with different foreground and background colors; you can even add a four-o'clock shadow to an object. (See Visio Home in Software Reviews, page 192.)





Dimentia 3D Home Architect lets you look at the same plan in a number of ways.

Visualizing in 3-D and Video

When the floor plan was finished and the appliances and fixtures were in place, we wanted to do more than just imagine. 3D Home Architect let us position a little 35mm camera just inside the door to the kitchen in the plan. We extended a small line in the direction we wanted to look at the room, and within five seconds, the whole kitchen sprang together — floor, then walls, then cabinets, stove, and sink — with light coming in through the window, shadows on the countertop, and realistic depth.

Just watching our plans take shape rocketed us to a new dimension. We could see exactly how pieces fit together, where there

might be a tight squeeze, even how we had placed the stools too close to the island. Leaving 3-D, we were able to move the stools around and then return to 3-D, picking another view to see what we would see from one of those stools. The room reassembled right in front of our eyes.

The Home Design folks offer a video tour of some of the homes featured on their CD-ROM. The effect is a little eerie, cruising through rooms with garish once-modern furniture in them and no people. But we got a feel for the places, even if we didn't share the current owners' taste in throw pillows. The Windows version has a 3-D Furniture supplement, but again, the designer seems to have spent too many nights in the Bates Motel in *Psycho*. Visio Home shows plans in 2-D only and for that reason rates the lowest in the visualization category.

When we were ready to build, we checked out the software to see what type of work to expect.

Estimating Costs

What most remodelers want to know is how expensive a project is going to be. When we turned to 3D Home Architect to build a detailed plan of the new bathroom, the Help system recommended that we give the program some details about the room. So we picked a name for the room (Master Bathroom), identified the ceiling height (8 feet), and chose the moldings (none on the ceiling, but 3-inch baseboard around the floor).

All these specifications flowed into a materials list the program was building for us and then to a cost estimator. That spreadsheet listed every building item and fixture. We entered the prices from our local building-supply store, and the program calculated subtotals (such as the cost of windows) and grand totals immediately. This gave us a rough estimate of what the cost of materials would be.

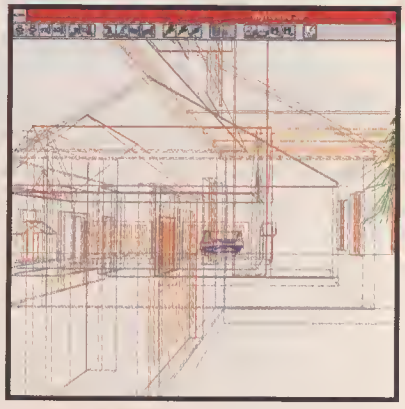
We found that Design Your Own Home Interiors offered a similar function through a separate product called the Design Estimator (from $59.95 to $99 for Mac, Windows, or DOS). For instance, when we changed our kitchen floor from linoleum to tile, we called up several tile centers and entered the cost of tile per square foot; in a few seconds, we had a new estimate.

Getting Information

These programs can't give you the intangible perspective that a good architect, interior decorator, or contractor can, but they do provide good design advice and warnings. For instance, while we were trying to adjust the door going from our bedroom to the bathroom, 3D Home Architect stepped in to warn us that we were trying to put a door too close to the corner.

For Do-It-Yourselfers

If you want to design an entire house and you're eager to lay out the actual studs and joists, try the Home Series (Autodesk, 800-228-3601; DOS disk, $30 street) or MyHouse (DesignWare, 800-536-2596; DOS and Windows disk, $59.95). You'll have to wrestle with a much more complicated computer-aided-design (CAD) interface, but you'll get a detailed plan that will be good enough to satisfy your local building inspector. These programs let you design multiple floor plans from the inside out. MyHouse even lets you create a kind of movie so you can move around from room to room.



Drawing Wizard Create complex line drawings of your dream house.

How They Stack Up

	Ease of Drawing Floor Plan	Number of Predrawn Elements	Manipulation of Elements	Color Changes	Visualization	Cost Estimates	Remodeling Advice	Total (Average)
3D Home Architect Windows CD-ROM, $60 street Broderbund 800-521-6263	4.5	4	4.5	4	5	4	4.5	4.4
Expert Home Design Mac & Windows CD-ROM, $49.95 (reviewed); also comes on floppy disk Expert Software, 800-759-2562	4	4.5	3.5	3.5	4.5	Windows disk only 3	4	3.8
Design Your Own Home Interiors Mac disk, $99.95; Windows disk, $59.95 Abracadata 800-451-4871	3.5	4.5	4	5	4	With Design Estimator 4.5	1	3.7
Visio Home Windows disk, $49 Shapeware Corp. 800-457-3335	4.5	3.5	4.5	3	3.5 (not 3-D)	0	1	2.9

Here's how the programs scored. We rated them on a scale of 0 to 5. If a product rates a 0 in a category, that means it doesn't carry that feature. A 5 signifies an outstanding feature of the program.

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—*Electronic Entertainment*, September 1994

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"97/100! ...the Vivid 3D is one of the best applications of an emerging technology that I have ever seen. Old games took on new life."
—*Computer Game Review*, August 1994

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The Vivid 3D sound enhancement system won the Retail Vision "Best Product" award in May 1994, and the Innovations award from the International Consumer Electronics Show in June 1994. Vivid 3D systems incorporate SRS technology which won the "Ultimate" award from *Game Players* magazine in July 1993. © 1994 NuReality. All rights reserved. SRS (●)® is a registered trademark of SRS Labs. All product names are trademarks or registered trademarks of their respective holders. MM3

In effect, 3D Home Architect invites a professional in to review your plans before you proceed. We were wondering how feasible our new bathroom plans might be, because we're not builders. So we chose Plan Check from the Options menu, and the program started thinking, and a message came up: "Plan Check finds no error in this plan." Of course, building codes vary (and you'll want your contractor to give the plans a good going-over before a wall is touched, anyway), so the OK just meant we hadn't committed some obvious blunders. But the program's check could have saved us embarrassment and potential problems down the road.

When we were ready to build, we checked out the software to see exactly what type of work we should expect to see completed. Expert Home Design on CD-ROM provided video tips on working with tools, showed experts talking about various problems (such as sanding under radiators), and gave text files with further advice about subjects like insulation and renewable energy. We found all this particularly useful when speaking to our contractor, because it told us what work had to be done and how it should be carried out. We also knew in advance how big a job we were undertaking.

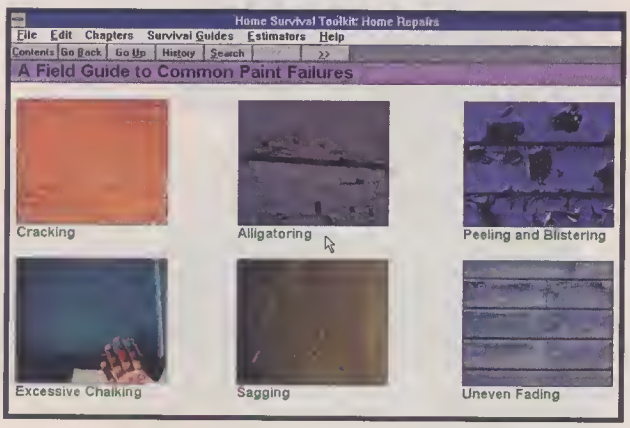
Once construction started, the software was especially useful. We printed out a new copy of the bathroom plan every few days, marking it up with our contractor as subtle changes were made. As the subcontractors came through, we nodded as they punched through the adobe, framed up windows, and installed electrical outlets. We were prepared for the work they were doing, and we got just what we expected — amazing, when so many home improvement jobs can end in tears and shouts.

When the kitchen was renovated, we used the plan to place the new appliances. We were delighted to find that the opening for the stove was indeed 1 inch wider than the stove, that the fridge could be maneuvered straight into position without more than a slight scuffing of the wall, and that the overhead fan in the dining room ended up directly over the table, as planned.

We haven't bought the stools for the new island yet, so we're still shopping, printout in hand. We know just what dimensions we can handle, and when the store has something unexpected, we're able to recalculate on the spot to see if our new version of the room can handle the pieces.

If you are looking for software specifically aimed at how to do certain projects, there are a couple of specialized programs. Weekend Home Projects (IVI Publishing, 800-432-1332; Mac and Windows CD-ROM, $59.95) is perfect for deck builders, plaster patchers, and other fixer-uppers. It provides videos similar to the PBS show *Hometime*, whose host, Dean Johnson, narrates them here. Besides great demonstrations, the program calculates the materials you'll need for projects and gives a shopping list of hardware. It also offers advice: it reminds you that when you're painting, you should check manufacturer recommendations for compatible top coats and primers.

Building Buddy Hometime includes great demonstrations of home-repair projects.



House Repair Aspirin These programs help solve problems such as decaying paint.

If you want to know how to unfreeze outdoor pipes, try the Home Repair Encyclopedia (Books That Work, 800-242-4546; Windows disk, $35, and CD-ROM, $49.95). It showed us how to remove stains from dozens of surfaces, from asphalt to wood floors, and how to unclog the garbage disposal (lever a broom handle against the side of the blades and wiggle it back and forth to free the clog). The Home Repair Encyclopedia doesn't come with video, but it does have clear, easy-to-understand pictures and has volumes of toll-free numbers for product manufacturers. It also has an estimator for paint and concrete.

Our Conclusions

So, which software should you buy for your next remodeling project? We think the all-around best program is 3D Home Architect, from Brøderbund, closely followed by Expert Home Design CD-ROM (this version is much better and easier to use than the floppy disk version) and Design Your Own Home Interiors. With 3D Home Architect, you can get started easily, put together a plan quickly, and look at the plan in 3-D. The Expert Home Design isn't quite as easy to draw with, but it comes with lots of predrawn images. Design Your Own Home Interiors is a little harder to get started on, but it has neat features, such as its color wheel, and lots of patterns for texturing your furniture; plus, you can add on a cost estimator. Visio Home doesn't aim to be as technical or informative as the others; built as an all-purpose home drawing kit, the program comes with lots of other family activities you can do. Whichever program you choose, you're sure to make your dreams a reality. FPC

Lisa and Jonathan Price *are frequent contributors to* FamilyPC. *Jonathan's book* The Trail Guide for America Online *has just been published by Addison-Wesley.*

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AGES 6-8

- Monker's Math Factory – Addition and Subtraction Skills
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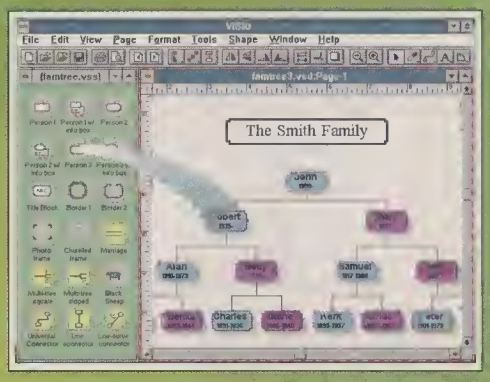
family tree. Your son drew a football team. the dog added a sleeping loft to his place. *Okay, you helped the dog.*



So you can't draw your way out of a paper bag. No problem. Using Visio Home is cake. Choose a shape from the stencil. Drag it and drop it on your drawing page. Type to add text. And you're done. In technical terms: Drag. Drop. Done. And if you ever need any help just click on the right mouse button. Pretty nifty stuff, huh?

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PLAN the PERFECT JOB SEARCH

When it's time to get back into the job market, these strategies and software tools will keep you on track

BY PETER SCISCO

IF YOU REGULARLY FANTASIZE ABOUT HAVING A JOB THAT IS MORE CHALLENGING AND BETTER-PAYING THAN THE one you have now, stop daydreaming and get busy. Your computer, of course, can help you produce professional-looking résumés and cover letters, but it can also do much more. With the right software, you can use your computer to develop and execute an aggressive marketing plan that will lead to your next job.

Your computer can help you track down career opportunities, communicate both electronically and on paper with potential employers, create a prize-winning résumé, organize your contacts, prepare for interviews, and make sure you follow up quickly and without fail on every prospect. If it's time for a change, our six steps will help keep you on track as you look for the perfect job.

Set Your Sights

Don't expect to land the job you want by flooding the world with your résumé. Before you even think about a résumé, you need to develop a job-hunt strategy.

"The first thing to do is figure out your target," says Kate Wendleton, author of the *Through the Brick Wall* (Villard Books, 800-888-4945 or 212-751-2600) series of books for job hunters and career changers. Selecting a target means picking industries and companies you'd like to work for, as well as regions where you'd like to live and work.

Roy Cohen, a senior consultant at Lee Hecht Harrison, a New

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Illustration by Jim Phillips

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York–based international outplacement firm, points out that your computer is an ideal research tool, especially if you're conducting your job search after hours while holding down a current job. Without leaving home, you can put CD-ROMs and online resources to work gathering information on specific companies, their competitors, and trends in the business you're pursuing. Job-Power Source (Windows, $49.95; InfoBusiness, 800-657-5300 or 201-221-1100), for example, is a job-search CD-ROM that includes a host of electronic worksheets that can help you define your achievements and can suggest jobs and careers you may not have considered — a great way to enlarge your target circle.

YOUR COMPUTER is an ideal research tool, especially if you're conducting your job search after hours while holding down a current job.

You can also expand your target list by prowling the electronic libraries and forums on America Online (AOL), CompuServe, Prodigy, and Genie. A modem can also connect you to the Internet and to private BBSes (bulletin board systems) dedicated to career and job listings.

AOL, CompuServe, and Genie subscribers can also access E-SPAN JobSearch, a nationwide electronic employment resource for job seekers and employers. On AOL, use the keyword `Career`. On CompuServe, Go ESPAN, and on Genie, type ESPAN. Use ESPAN to search more than 1,000 advertised positions in such fields as engineering, manufacturing, sales, marketing, and accounting, by job category or geographical region.

AOL subscribers can tap into the Career Resource Library, Help Wanted USA to search for opportunities by category and state. You can also go to the Career Counseling Services to schedule an appointment with a professional career counselor, among other options.

James Gonyea (whose company provides several of the job-search services available on America Online) has also written *The On-Line Job Search Companion* ($14.95; McGraw-Hill, 800-262-4729 or 813-372-1333), which does a thorough job of listing where to find a wide variety of electronic job-search resources. His book lists resources on the commercial online services, more than 100 BBSes that focus on careers and job postings, from FedWorld (international federal employment opportunities) to Jobs in America (a nationwide listing of job openings), and a compendium of job-search-related software packages. The book also provides long lists of Internet resources, including a listing of newsgroups (such as biz.jobs.offered and misc.jobs.misc) that job seekers can use as electronic meeting places.

Create a Network of Contacts

Networking — letting people know you're looking for a job and meeting people working in your chosen field — is crucial to a successful job search. You can't just use your target list to blanket companies with dozens of queries and cover letters. "Don't write to Personnel unless you want to work in Personnel," Wendleton advises. You need to find a friend-of-a-friend contact at each company to use as a starting point.

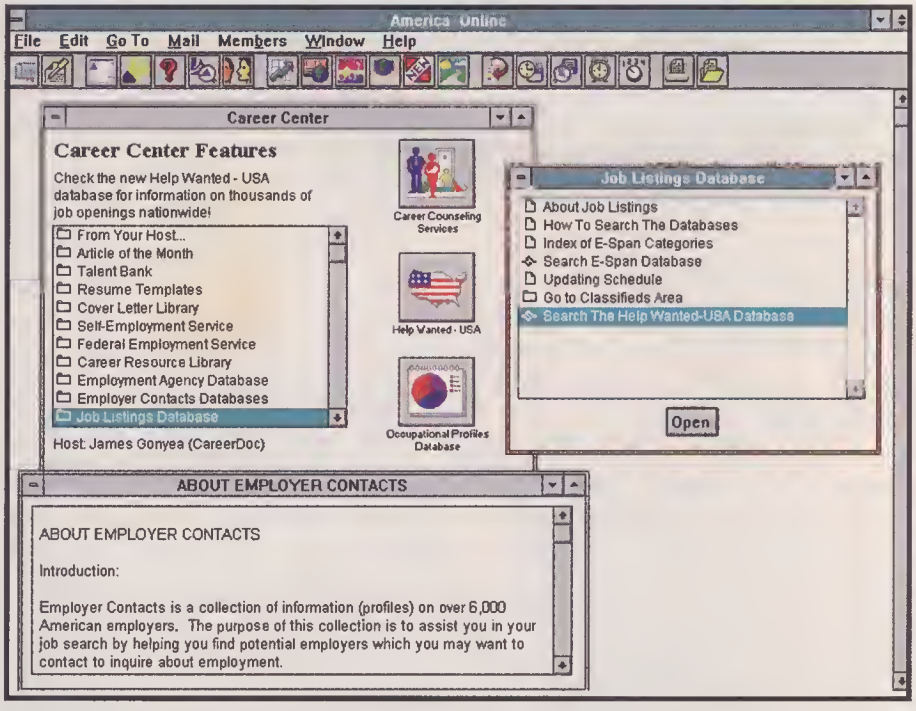
You need to talk to dozens of people in succession to find a handful of people who actually have the power to hire you. Then networking with that smaller pool will lead you to the people who will actually make you a job offer.

Wendleton divides networking into three stages. During stage one, you talk regularly to six to ten people who are familiar with your job-search plans and can provide names and phone numbers of suggested contacts. Following up eventually leads you to stage two, when you talk to people with the power to hire you. Once you reach stage three, the people you talk to make you job offers or develop a position for you. You'll probably have to choose between jobs — which is the position all job seekers want to be in.

Wendleton suggests beginning the networking process by calling local support groups and professional organizations in the field you want to enter. Anyone you meet could lead you to a job prospect — naturally, the more people they know, the better.

Keep in mind that your PC's online capabilities allow you to "meet" hundreds of people at a time. Information USA on CompuServe is an excellent place for tracking down those special-interest and professional groups.

Also, look on CompuServe and other



Online Job-Search Help America Online subscribers can use Keyword `Career` to access a multifaceted area that serves job seekers' needs.

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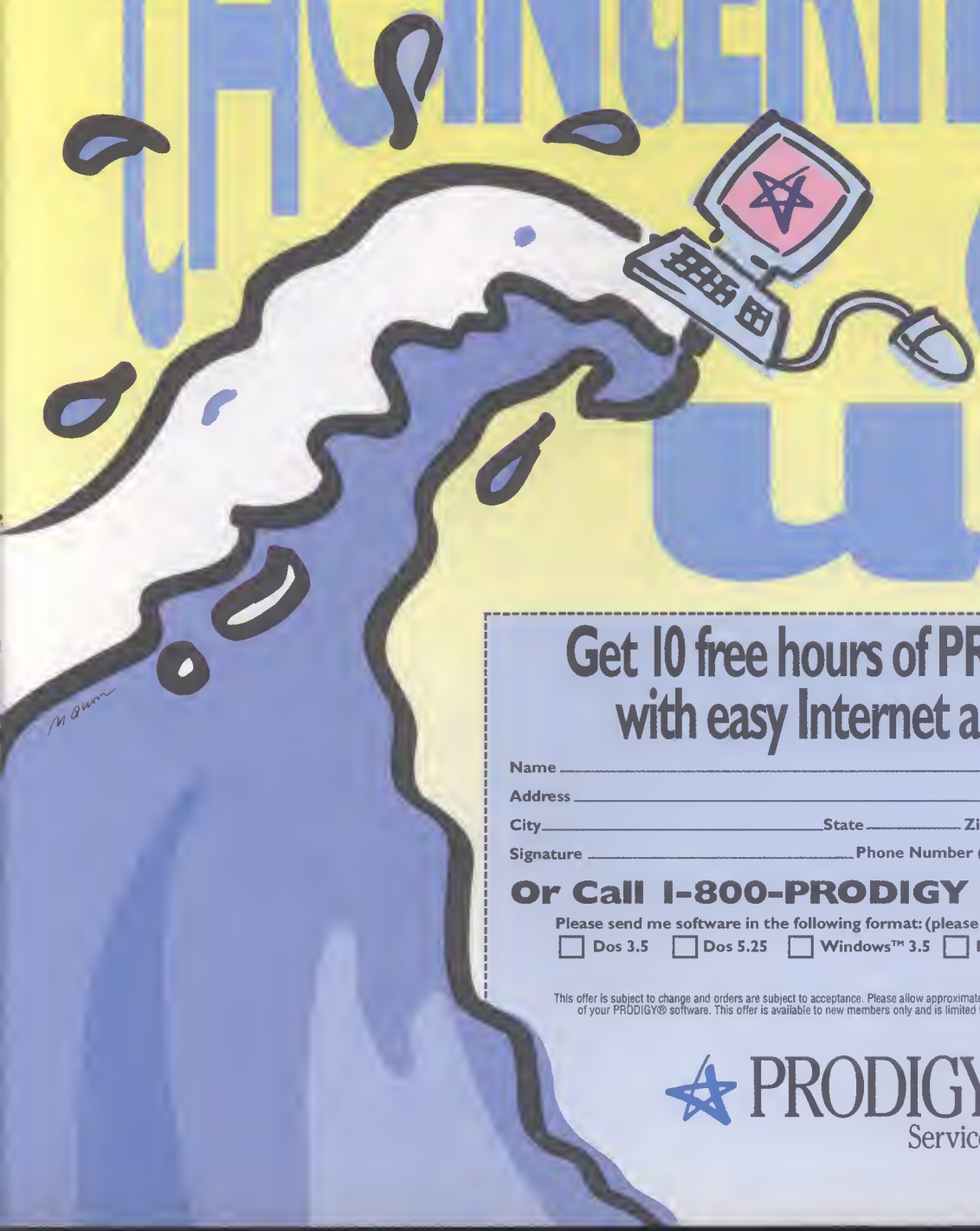

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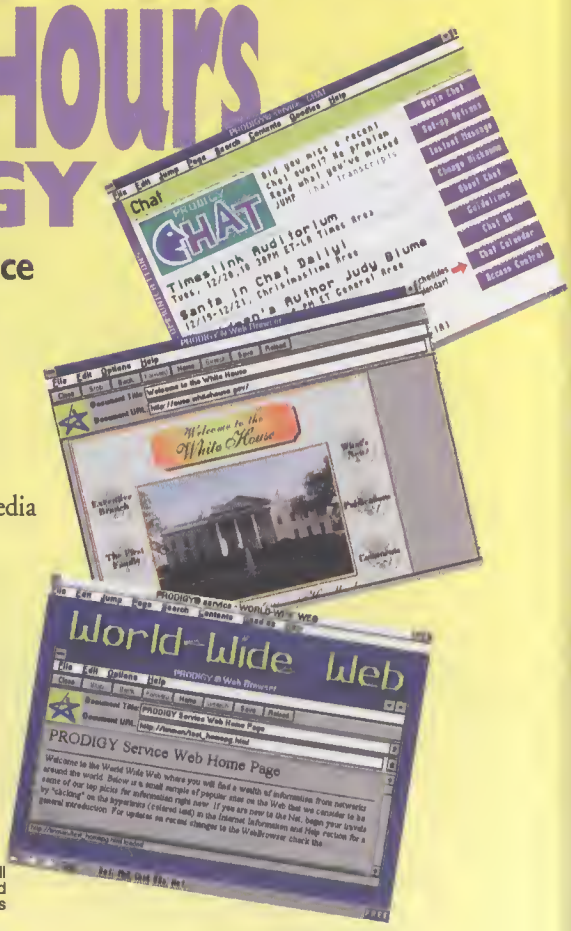

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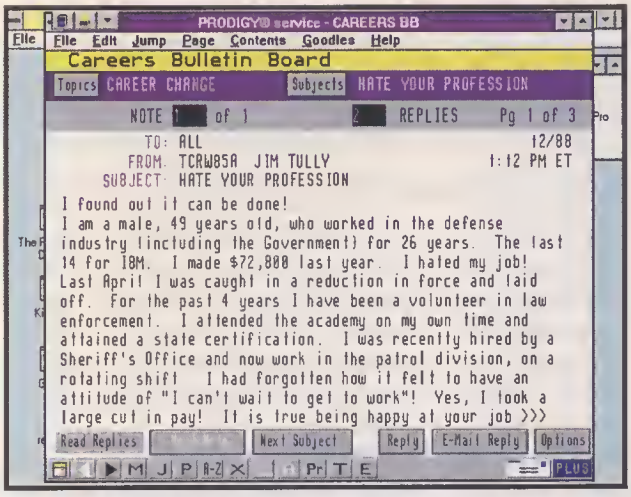


Online Networking Prodigy's Careers Bulletin Board and others like it allow you to "meet" hundreds of people at a time and make them aware of your job-search goals.

commercial online services for forums and discussion groups related to your professional field. Offline, peruse Job-Power Source for organizations in hundreds of occupational fields.

Track Your Progress and Contacts

Once you're networking regularly, you'll want to put your PC to work to keep track of all those contacts — and all the information you get from each. Even if you're a diehard paper-based datebook user, you can use computer-based tools to keep track of names, phone numbers, and notes without giving up your datebook. You could use tools already on hand by turning to Cardfile (in Windows' Accessories group), HyperCard Player's Addresses stack (in the most recent Macintosh models), or the database sections of ClarisWorks and Microsoft Works. These all provide an elementary way to keep track of contacts.

But if you spend a little time at your family computer each day, it makes sense to turn to software specifically designed to track contacts. Computer-based contact managers give you a variety of features that keep you on top of all the follow-up actions that an organized job seeker needs to do daily. Here are three key features to look for in selecting contact management software:

1 an automatic reminder/alarm or "tickler" feature that pops up on your calendar, reminding you to do every follow-up step on the day you promised you would;

2 phone logs or a notes section that lets you take notes during a phone conversation;

3 an address book or contacts list, preferably one that automatically dials any number you select.

Also convenient is a mail-merge feature that lets you import addresses into letters or other documents.

In addition to dedicated contact managers, you can use the contact manager sections of job-hunt software or use the contact manager/address book in a personal information manager (PIM).

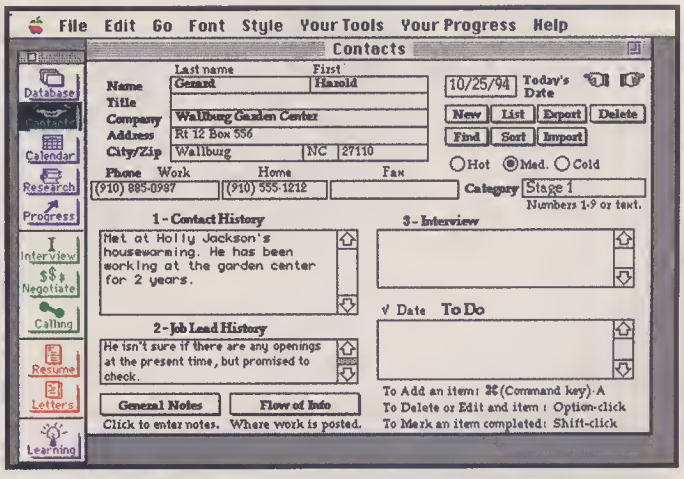
Achieving Your Career has the best contact manager we've seen in integrated job-hunt packages. It lets you categorize each conversation as a Contact History (stage one), a Job Lead history (stage two), or an Interview (stage three). Click on the Progress button to organize your contacts and to see at a glance where you stand. When you need to follow up, the program reminds you of what to do and when at the appropriate time.

You're Hired can also help you maintain a list of contacts, but the contacts must be sorted according to job categories (like sales or retail) and are best used during stages two and three of your job search. The program doesn't help much during stage one. And while you can track the results of each contact you make, the program won't automatically remind you of appointments or follow-up obligations.

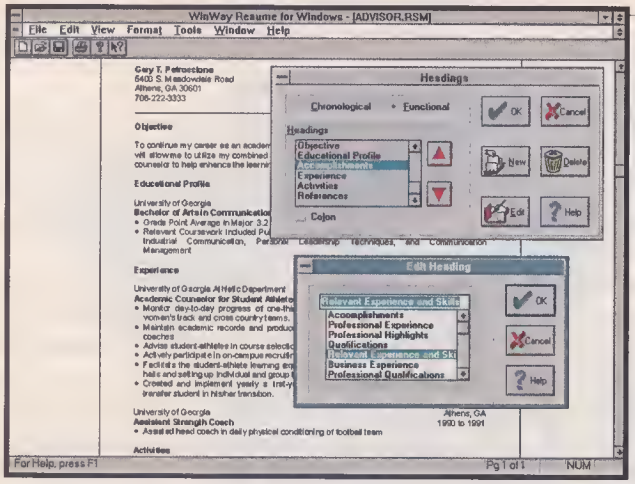
PFS:Resume & Job Search Pro lets you use the Notes area in the contact manager to identify each contact by stage and then sort your Notes to get an idea of which contacts need cultivating. You can also schedule appointments, which will appear in the program's Calendar, and then use the Calendar as a quick visual guide to your progress. If you have scheduled appointments, the program's reminder feature will keep you on track with an alarm you can set in advance.

You may prefer to turn to a PIM — software that will outlive your job search. The best PIMs include calendar, address book/contact list, notes, and to-do list sections, all designed to work together to keep you organized. Claris Organizer (Mac, $70 street; 800-325-2747 or 408-987-8227; see review on page 60), Lotus Organizer 2.0 (Windows disk, $99; Lotus Corp., 800-343-5414 or 617-577-8500), Ecco Simplicity (Windows disk, $80 street; Arabesque Software, 800-457-4243 or 206-869-9600), and SideKick (Windows disk, $99.95; Borland, 800-533-0004 or 408-431-1000) are serious, businesslike, proven winners. Day-Timer Organizer (DOS/Windows disk, $139; Day-Timer Technologies, 800-225-5005 or 415-572-6260) is a newcomer that's modeled after the popular paper-based datebook system.

People in sales and marketing routinely use software that specializes in contact management, such as Act (Windows disk, $279.95; Mac disk, $249.95; Symantec, 800-441-7234 or 408-253-9600). Act includes a word processor, a report writer (for generating the wide range of progress reports that salespeople need to generate), and password protection. Because of its complexity and sophistication, the program is great if you juggle dozens of phone calls, meetings, and sales calls each day. But it may be overkill for most job seekers outside of



Contact Management Achieve Your Career has the best contact management module of the integrated job-search packages.



Flexible Résumé Guidance WinWay Resume for Windows provides a wide variety of design options.

the sales/marketing specialty. Instead, take a look at 1stAct, a streamlined $60 PC version of its heavy-duty sibling.

Custom Résumés

Once you're talking regularly to people in a position to hire you, you'll need to present your résumé and fire up your system for sending it out with a cover letter, by e-mail or the U.S. Postal Service. Don't think of your résumé as a listing of every job you've ever had — treat it as a sales presentation, with you as the product.

Experts like Wendleton and Cohen agree that a résumé must sell you to your prospective employer and must do the job fast. A good résumé highlights the specific talents you bring to a job, so it has to be customized for each potential job. Creating that kind of presentation is nearly impossible without a computer.

The word processor you own now may be all you need for making a terrific, customized résumé. Word for Windows 6.0, for example, includes two résumé templates, as well as a résumé "wizard" that guides you through the process of writing a résumé. Integrated software programs, like Microsoft Works and ClarisWorks, also provide résumé templates. If you have any of these packages, you don't need a dedicated résumé-writing program unless you need a wider range of design options or want to be prompted with suggestions on presenting your skills in the most graphically effective way.

An advantage to using a word processor is that you can create a master résumé and then cut and paste your skills, objectives, accomplishments, and work history to create customized presentations. The disadvantage is that you have to do most of the design work yourself. That's where a résumé-writing program can help.

If you decide to turn to a résumé-writing program, be selective. Don't lock yourself into software that won't allow you to adapt its formats to your own needs.

WinWay Resume 2.0, for example, is flexible. It gives you complete control over 125 sample résumés. You can reorder major sections, align sections differently, change type styles, and even add your own headings — in color, if you choose.

ResumeMaker with Career Planning is an

Job-Search Packages Compared

	Achieving Your Career	PFS:Resume & Job Search Pro	ResumeMaker with Career Planning	You're Hired	WinWay Job Interview	WinWay Resume 2.0
	Up Software	SoftKey International	Individual Software	DataTech Software	WinWay	WinWay
	800-959-8208 or 415-921-4691	800-227-5609 or 617-494-1200	800-822-3522 or 510-734-6767	800-377-3213 or 717-652-9344	800-494-6929	800-494-6929
General Features						
List price	$69.95	$49.95	$49.95	$49.95	$69.95	$69.95
Platform	Mac, Windows	DOS, Windows	DOS, Mac (Windows expected in early 1995)	Windows	Windows	Windows
Format	Disk	Disk	Disk	Disk	Disk	Disk
					CD-ROM combining both WinWay products ($69.95) expected in early 1995	
Research Tools						
Job-target manager	Y	Y	Y	Y	N	N
Trade groups information	N	N	N	N	N	N
Industry trends	N	N	N	N	N	N
Company information	Y	N	N	N	N	N
Networking Tools						
Appointment book	Y	Y	Y	Y	N	N
Calendar	Y	Y	Y	Y	N	N
Alarm-setting capability	N	Y	N	N	N	N
Address book	Y	Y	Y	Y	N	N
Phone dialer	N	N	N	N	N	N
Job-search progress tracker	Y	Y	Y	Y	N	N
Résumé Tools						
Résumé templates/samples	Y	Y	Y	Y	N	Y
Text editing	Y (Mac only)	N	Y	Y	N	Y
Fully customizable formatting	Y	Y	N	Y	N	Y
Word processor	N	Y	Y	N	N	N
Interview Tools						
Interview prep	Y	Y	Y	Y	Y	N
Interview follow-up	Y	Y	N	Y	Y	N

alternative for Mac and DOS users. Its résumé-making section is less flexible than WinWay Resume's or PFS:Resume's. You can't freely customize the formatting of the program's résumé templates: the text for each résumé section is stored on an electronic index card, and you edit the text on each card. But the program includes an address book, a contact manager, and an appointment calendar, in addition to a word processor that's linked to a guided letter-writing feature. (See the Product Comparison Chart, page 158, to compare features at a glance.)

Once you're satisfied with your résumé, send it with a short, hard-hitting cover letter that highlights the one or two strengths that would be most interesting to your recipient. Find out if your recipient prefers to get résumés in electronic or printed form, and comply with those preferences.

Prepare for the Interview

When you land an interview, spend a little time with your computer to research the basic facts about the company that you're interviewing with. Dun & Bradstreet and Hoover Company business profiles are available on CompuServe (choose Find from the Services menu, type the company name, and press Return). and similar business-profile databases are available on all the leading commercial online services.

Kate Wendleton advises job seekers to use a 3 by 5 card to prepare for interviews; computer users can prepare their thoughts on a single sheet of paper. What you want is a list of your key skills and experience, and key facts about the prospective employer. Use it as a cribsheet: review your notes a few minutes before your interview.

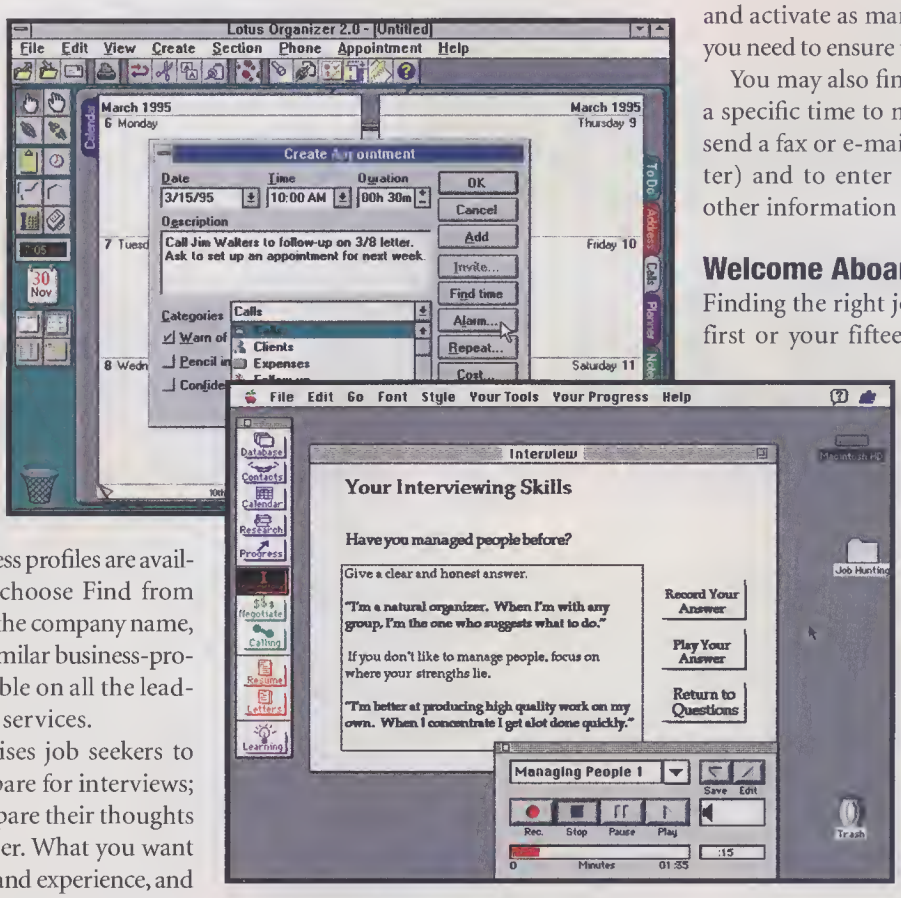
Using your computer to prepare your interview notes is quick and easy. Just cut and paste relevant sections from your research notes and the most pertinent key phrases from your résumé.

Some job-search software also helps you prepare for interviews by creating practice sessions. Achieving Your Career displays sample questions, with tips on how to respond.

WinWay Job Interview performs similarly, but it asks you to type your answer into a designated box and then prompts you to rate your answer. When your answers are consistently clear, credible, and confident, you're ready for your interview.

Follow-Up without Fail

After your interview, it's a good idea to send a short thank-you note. Review the strengths you could bring to that company.



Follow-Up and Interview Help Lotus Organizer (above) lets you set alarms for follow-ups. Achieve Your Career lets Mac users record and evaluate answers to interview practice questions.

If you've maintained your contact list thoroughly, your notes from previous conversations will help you include some pertinent highlights in your note. To improve the odds of the recipient reading your letter, use the approach of an experienced salesperson: send it three ways simultaneously — electronically, through the mail, and via fax.

It's also important to follow up on the date you said you would. Only you know how many bells, whistles, and alarms you need to spur yourself to action. For most people, it's enough to place reminders in your calendar the day before and the day of your intended next contact — but do what works for you. Use your PIM or contact manager and activate as many reminder features as you need to ensure that you'll pay attention.

> TO IMPROVE the odds of the recipient reading your letter, send it three ways: electronically, through the mail, and via fax.

You may also find it helpful to schedule a specific time to make the phone call (or send a fax or e-mail message or mail a letter) and to enter the phone number or other information you need.

Welcome Aboard

Finding the right job — whether it's your first or your fifteenth — is tough work. Competition is fierce. Companies look for people with skills to help the bottom line. You can use your family computer to market yourself as one of those people.

Your family PC eliminates much of the job-search drudgery and allows you to customize the information you provide — to highlight different aspects of your track record for different prospects.

You might also need a little luck as well. But your computer will put you in a position to take advantage of the breaks when they come your way. FPC

Peter Scisco *is a contributing editor for* FamilyPC.

Build a Better Budget

Use your PC to create a budget and stick to it in the months ahead

BY GREGG KEIZER

LIKE A LOT OF GOOD ADVICE, *live within your means* makes sense. It even sounds smart. But putting that advice into practice takes dedication.

Creating a budget isn't tough. All you need is a calculator, some paper and sharp pencils, and an idea of the money that comes in and goes out. What's tough is following that budget: comparing what you really spent against the targets you set and then acting on the information.

If you're like most families, you've taken a crack at budgeting but not made it past the first month or so. Watching the dollars and dimes is just too time-consuming. Equip your home computer with a personal-finance program like Quicken, Managing Your Money, Simply Money, or Microsoft Money, though, and you have a fierce budget watchdog at your side. Your PC will not only help you build a budget, it will help you stick to it, too — not just today, but weeks, even months, down the road. How? We'll show you in just a few steps.

Budgets: What's the Point of Them?

Some families won't get much out of a budget. Those who effectively pinch pennies probably have a good idea of what they're spending, while the ultra-wealthy don't need to know. Most of us fall between those two extremes; we're the ones who should budget.

A budget is essentially a financial plan that demands some record keeping. You set spending limits for a number of general expense categories, keep track of what you buy, and compare the numbers at the end of the month. By definition, a budget brings at least some order to a typical family's chaotic spending habits. But it serves other purposes, too.

- It identifies wasteful spending by highlighting the often-overlooked purchases that can quickly and imperceptibly add up.

Photo Illustration by Ken Davies

Actual vs. Budgeted Categories
(Sorted by Budget Difference)
1/94 - 10/94
Monthly Budget vs. Actual
1/94 - 10/94
1/94
3/94
5/94
VISA

- It helps you save for both short- and long-range goals, such as a new car, a down payment on a house, or college for the kids.
- It shows if you're living within your income — and if not, by how much.

A budget can't add money to your paycheck. But it can help you more effectively spend the money you make.

Why Budget with the Computer?

The home computer is a terrific budget helper. Not only is it an accurate record keeper — the soul of a budget — but it also instantly calculates the numbers. You can quickly adjust a budget's values and see the effect of these changes. And via charts or graphs, the computer can show whether you're working within the budget.

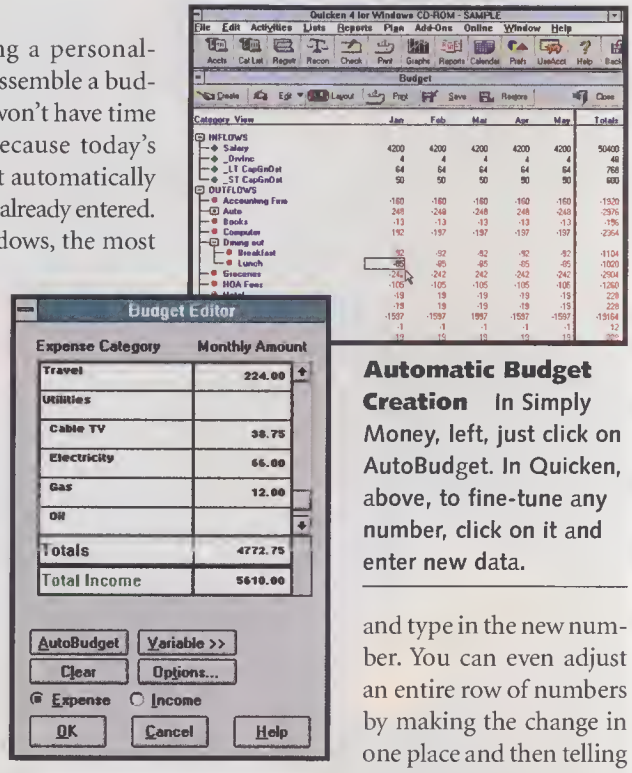
The computer can't do it all, of course. You still need to provide it with information. It can't make decisions for you. Still, almost everything connected with a budget is easier to do on the computer than on paper, especially if you already use a personal-finance program.

Making a Budget

Too many times, we think about creating a family budget but shy away before we actually tackle the project. Maybe it's because we simply don't want the bad news, half knowing that the numbers will be depressing. Or perhaps we think it will crimp our spending style (which it may, but then, that's the point, isn't it?).

If you're currently using a personal-finance program, you can assemble a budget so effortlessly that you won't have time to make excuses. That's because today's software can build a budget automatically using the information you've already entered.

Take Quicken 4 for Windows, the most recent version of the popular checkbook program, as an example. When you choose Budgeting from the Plan menu and click on the Create button, Quicken digs through last year's records, adds up all the transactions (both income and expenses), and displays an average amount for each month for each category. Simply Money, Microsoft Money, and Quicken all offer an automatic budget-building feature; Managing Your Money lacks the feature.



Automatic Budget Creation In Simply Money, left, just click on AutoBudget. In Quicken, above, to fine-tune any number, click on it and enter new data.

In Quicken, you'll see a ledger-like display on the screen, with categories as rows and months as columns. The numbers — expenses in red and income in black — are the budget amounts for each category for each month. You'll probably need to fine-tune this formulaic budget. Fortunately, it's easy to change the budget's numbers.

To modify a value, just click to select it and type in the new number. You can even adjust an entire row of numbers by making the change in one place and then telling the program to flesh out the rest of the row with the same value. If you want to add a category that doesn't appear — maybe you haven't been tracking your lunch expenses but you want to include them in the budget — you can jump back to the main part of the program, create the category, and then enter budget values under the new Lunch label. (The numbers you place in the budget part of the program have no effect on the transactions you've entered in the checkbook.)

These easy changes come in handy not just at the beginning, but also later as you modify the budget. Unlike with a paper budget, you can change a computerized budget without recopying numbers.

Want to know if you're planning to spend more than you make? Just look at the bottom line, which compares total expenses and income for the month.

Quicken also offers a tool called *supercategories*, which can simplify the budget process. Supercategories can group several categories under one heading. To see just one budget item, called Cars, for example, you would lump together more precise categories, like Car:Insurance, Car:Payment, Car:Gas&Oil, and Car:Repairs. Supercategories give you the big picture a little more quickly.

Of course, you can start a budget from

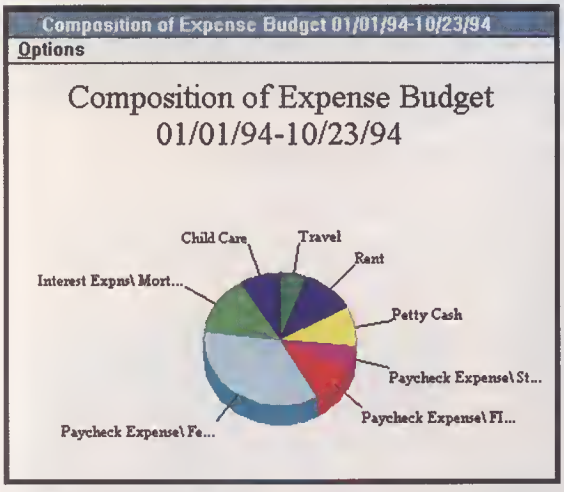
Budget-Building TIPS

- Budgeting relies on the personal-finance program's categories. If you don't categorize the transactions you enter, you won't be able to budget effectively.
- Your built-by-the-computer budget will be more accurate if you have at least a full year's worth of transactions already entered in the program.
- If you're like most people, you don't track your cash expenses carefully with your personal-finance program. Each dollar adds up, so for an accurate budget, enter some estimates to account for your out-of-pocket spending. Hint: Take a look at the amount you withdraw from the ATM each month.
- Depending on how tightly you're trying to squeeze into a budget, you may want to track every possible penny. Remind everyone in the family to get a receipt for every purchase — no matter how small — and tell them to write their name on it before tossing it into a conveniently placed bowl. Review receipts once each budget period and enter them in the personal-finance program.
- If your income varies wildly — you're paid by the hour and sometimes work overtime, for instance — calculate an average monthly income by combining several months' worth of paychecks.

scratch if you don't have a long history of using personal-finance software. In this case, the program can't pour in numbers from records it has on hand. At the outset, it's more like a blank paper ledger: you have to estimate the amounts for each category yourself and then enter them manually.

To do that, grab a sheet of paper and jot down as many major expense categories as you can think of. (For a starting point, scroll through the list of default categories in your personal-finance program.) Utilities, groceries, child care, medical, dental, automobile, mortgage/rent, clothes, dining out, insurance, credit-card interest, and household maintenance are naturals.

Collect your checkbook register, recent credit-card statements, paycheck stubs, and last year's tax return. Then sit down and try to estimate how much you're spending in each category, on average, each month. This is the hardest part of the job if you haven't been using a personal-finance program. When you formulate a budget, it's best to err on the conservative side. In other words, if you estimate an expense within a range (say $100 to $150), put down the higher number. You're essentially creating a worst-case scenario for your budget. Of course, you can always knock down the amounts later. Do the same for your income.



A Piece of the Pie Simply Money has several types of charts and graphs. This pie chart makes it easy to see where your money is going.

Now take those numbers and enter them in appropriate categories within the personal-finance program's budget area. You may have to create a few categories from scratch (the program may not, for instance, have a preset category called Kids' Tuition, which you may need to track expenses for private school or college tuition).

Finally, create a budget report, check it out, and make changes to the budget amounts if things look awry. When you're satisfied with the budget, save it, if the program offers that feature.

Once you've built the budget, it functions just like one created by the computer — assuming you begin to use the personal-finance program to record and categorize all financial transactions (expenses and income). You can monitor it, use it as a basis for charts and reports, and modify it.

But now that you've built a budget on the computer, what do you do with it?

Following a Budget

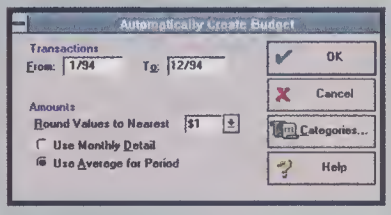
The power of the computer really comes into play when you start using it to monitor your budget. A pencil-and-paper budget is unwieldy in comparison.

The best way to follow your budget's progress is with a chart or a graph. Every personal-finance program provides at least one. In this case, a picture is worth a thousand words, because you can see how you're doing at a glance. Budget charts vary from program to program, but they all compare the budgeted amounts in each category to your family's actual expenses and income. (Of course, for this to work, you must use the program to record your paychecks and expenses.)

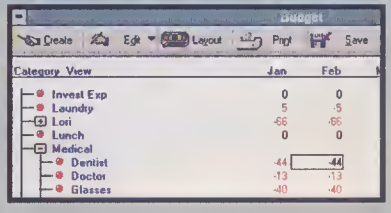
In Quicken — the best of the bunch when it comes to budgeting — the chart is called Budget Variance. It's available within the Graphs menu item under the Report menu heading. Select it, and almost instantly Quicken builds a chart that shows whether your total net income (income minus expenses) was over or under the budgeted projections. In effect, it tells you if you're staying within your overall budget. The chart also displays the success of the budget by category; if the actual expenses for a category are higher than the budgeted amount, you've exceeded the budget there. This can pinpoint exactly where you're winning or losing the budget battle. Even

HOW TO MAKE A BUDGET

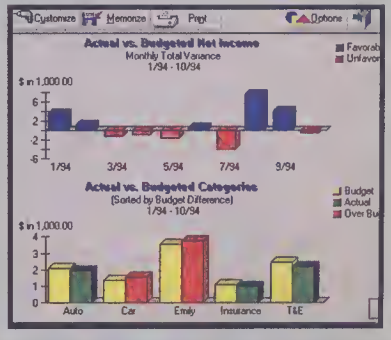
1 Instruct the program to make a budget from the financial information you've already entered. It won't be perfect, but it can save you considerable time as you get going.



2 If necessary, make changes to the budget built by the computer. Click on any amount item and type in a new number. The totals at the right and at the bottom, which you can't see here, automatically change to reflect the new budget.



3 Create a budget chart at the end of each month so that you can compare your actual spending with your estimates. Charts are a great way to detect out-of-control spending, too. According to this chart, more was spent on the car and on Emily than was originally budgeted.



more impressive, you can click on any element of the chart and see an expanded (and more detailed) illustration. Click on a month where you've blown the budget, for example, and Quicken shows the categories that contributed to your downfall.

Rather than look at charts, you can view and print out a budget report instead. Such a report typically lists the amounts budgeted for each category and the actual expenses and income for comparison. You'll have to go over a report carefully to get a real feel for the budget situation, but sometimes it's useful to see the numbers in black and white.

Get the Details Click on any element in Quicken's budget chart, and you'll see a more detailed description of spending.

Because you don't have to do any extra work — since you're already using the program to manage your accounts, as well as categorizing each transaction — reviewing the budget takes just minutes instead of hours. Since a budget's easier to review on the PC or Mac, you're more likely to do it — and more likely to do it frequently. Both are critical ingredients to the success of any budget.

Review the budget's progress every month — more frequently if you can — and compare the actual expenses to your estimated amounts. Then use the information you receive. You can either change the budget to more accurately reflect your spending or, better yet, change your spending to fit the budget. The first is easy, but it may be sidestepping the issue. The second is harder, but at least now you know where you're spending too much, how much you're bringing in, and whether there's any money left over.

More Tools to Make Your Budget Work Smarter

The best personal-finance packages don't stop there. They give you more tools for putting your budget to good use and for helping you track the money you're saving.

BUDGET TRACKING TIPS

- Whenever you write or record checks with the personal-finance program, take an extra minute to create a budget comparison chart. You'll avoid nasty surprises if you check your progress frequently.
- When you spot a category that's out of whack with its budget, create a transaction report (in Quicken, select the category from the Category & Transfer List box, then click on the QuickReport button). You'll see each transaction in that category and maybe see what went wrong.
- The newest versions of Quicken let you create a *Snapshot*, an instant graphical view of your finances. Customize the Snapshot so that it shows progress bars for the most important budget categories and at least two budget-related charts. You'll be able to watch your budget more closely.

Bare-Bones Budgeting

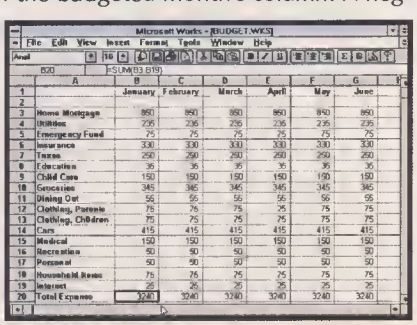
How to do it with only a spreadsheet

Just because you don't have Quicken or one of the other personal-finance programs doesn't mean you can't budget with your PC or Mac. All you need is a spreadsheet program.

Open a new worksheet in the spreadsheet and enter budget categories — Groceries, Utilities, Car, and so on — as row labels. Type in the months as column labels. Next, enter the amounts for each category for each month. (Use the Fill Right command to fill an entire row with the same value if the budgeted figure remains constant from month to month.)

The computer can add these numbers instantly, but you have to tell it how. In the first empty column at the far right of the worksheet, type a label such as *Total*. In the first cell of that column, enter the **=SUM** function and then select the entire row of numbers. In Microsoft Works, for instance, the ensuing formula might look like **=SUM(B2:B20)**. Repeat for all the rows. To calculate each month's expenses, add a *Total Expenses* label to the bottom row. Use the **=SUM** function to add up all the numbers in that column (in most spreadsheets, you can select the entire column and cells will be entered into the formula for you).

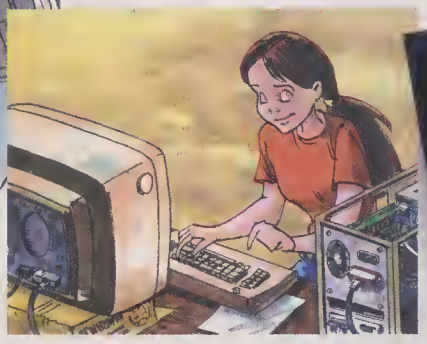
You can add to this stripped-down budget by averaging the monthly expenses per category (use the spreadsheet's **=AVG** function and build a formula that divides the Total value by 12). Later, after you've tracked actual expenses for a while, you can insert a new column named *Actual* beside each past month. Enter your actual expenses; then **=SUM** them. To compare the budgeted amounts to your actual expenses, create a column labeled *Dif* (for Difference) next to the Actual column. The formula in that column should subtract the number in Actual from the one in the budgeted month's column. A negative number means you exceeded the budget.



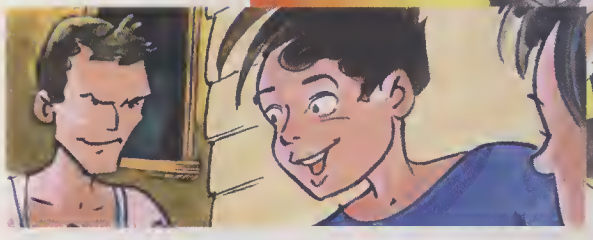
Finally, use the spreadsheet's charting and graphing features to build illustrations of actual-versus-budget comparisons.

Futurekids

THE INTERNET EXPEDITION



ISBN: 1-56276-271-0 $9.95



Futurekids brings together four very different kids from around the world as they become online pen pals. When one of them disappears through a strange window on his computer screen, join in the adventure as his friends follow to risk a daring rescue in the uncharted corners of the Internet.

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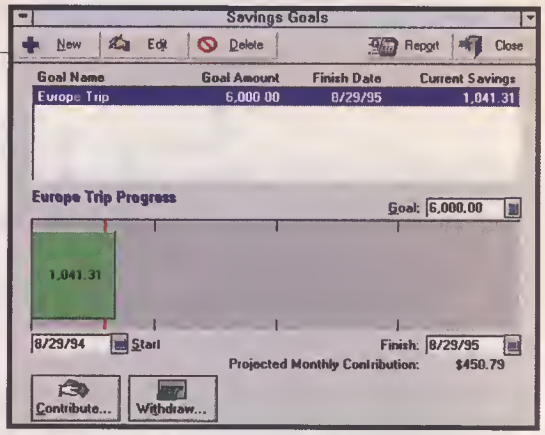
FUTUREKIDS

Quicken stands out here. Its forecasting tool uses the numbers inside your budget as a basis for predicting the future. Click on Forecasting under the Plan menu, and you'll see an estimate of what the family's finances should look like in a month, a year, even three or four or five years. Like a budget, the forecast tool relies on categories and past transactions for its appraisal, though it also tosses in scheduled expenses (such as car and house payments) that you've marked as regular and recurring.

You can play out what-if scenarios at will, changing the data to reflect an income jump next year, for example, or larger mortgage payments for a new house. The resulting graph charts your account balances. If the line tends upward, it's a mark of well-managed finances. But if it slopes down — whether gradually or at a sharp angle — you may need to cut back even more now to prevent catastrophe later.



Saving for a Major Purchase? Let Quicken track your progress. The red marks in the bar show how much you should have saved so far.

Managing Your Money offers a Cash Forecasting report. This feature is a lot less sophisticated than Quicken's forecaster, but it does show you projected cash-on-hand account balances through the period you specify.

Another tool worth exploring in Quicken is its Savings Goal. While it's not strictly a budget tool, it can help you use the money you've trimmed to save for a major purchase in the future.

Here's how it works. You set up a Savings Goal account — say New Furniture — and assign it a total amount and the date when you plan on the purchase. Quicken figures out how much you have to save each month (it's a bit like a budget in this respect). As you contribute to this savings plan by transferring money from a checking account, Quicken "hides" the money from you by not including it in the account balance. It's still there, of course, but since it doesn't show in the bottom line, you won't be tempted to spend it.

Time to Trim the Fat

Your family's budget is your business. Only you can prevent unnecessary spending, save for the future, and be a smarter shopper. Fortunately, your personal-finance manager can step in and show you exactly where you're spending too much and where you might cut back. It takes a bit of work, but the result — a leaner, meaner budget — is worth the effort. FPC

Gregg Keizer *is an Oregon-based journalist who writes for a variety of publications.*

BUDGET MANAGEMENT TIMETABLE

Week One: Discuss budget with adult family members, create budget, print and hand out copies.

End of Each Month: Create a budget comparison report and chart to review success. Make adjustments to the budget or to spending as necessary.

End of Each Six-Month Period: Discuss budget progress and adjust the budget figures if necessary.

End of Each Year: Build a new budget based on the past year's numbers.

Features of Personal-Finance Programs

	Quicken	Managing Your Money	Simply Money	Microsoft Money
Price	Disk, $39.99 (street); CD-ROM, $59.99	$79.95	$69.99	$14.95 until March 31 (street)
Platform	Windows, DOS, Mac	Windows, DOS, Mac	Windows	Windows
Format	Disk; CD-ROM (Windows only)	Disk	Disk	Disk
Manufacturer	Intuit	MECA	4Home Productions	Microsoft
Phone number	800-624-8742 or 415-322-0573	800-537-9993 or 203-255-1441	800-773-5445 or 206-882-8080	800-426-9400 or 206-882-8080
Pros	Automatic budget-building; supercategories combine several categories for simpler views	Easy to compare actual spending to budget	Automatic budget-building; large variety of budget-related charts and graphs	Automatic budget-building
Cons	Can budget for only one year at a time	No automatic budget-building; difficult to make a budget	Can see only a small part of the budget on the screen	Can't view entire year's budget without creating a report
Automatic budget-building	★★★★★	n/a	★★★★★	★★★★★
Ease of entering budget manually	★★★★★	★★	★★★	★★★
Budget graphs and charts	★★★★★	★★★	★★★★★	★★★
Budgetary extras	★★★★★	n/a	n/a	n/a
Overall budget prowess	★★★★★	★★	★★★	★★★

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Get Tech Support Fast

By PRESTON GRALLA

For many technical problems, online support is faster and more convenient than phone support

PICTURE THIS: IT'S THE night before your daughter's book report is due. She's using Creative Writer for the first time and is now ready to print. She issues the print command, and only half a page prints. Or you're playing Myst with your son, and there's no way to get to the next level — a clue seems to head you down a blind trail. Or worse yet, you simply can't get your multimedia educational software to work with your sound card.

You could try to call the hardware or software company's technical-support line — if you're lucky enough to have problems during the hours it's open. You also could hope you won't be kept waiting on the phone for more than an hour while you're footing the long-distance charge and possibly a pretty hefty per-minute surcharge.

Better yet, you could dial into an online service and get a quick solution to your problem. Dozens and dozens of hardware and software companies now offer online help with the major online services, including America Online, CompuServe, and Prodigy. You'll find it's often the fastest, cheapest, and best way to solve your computer-related problems (see "Online versus Hotline," page 170).

Many companies staff their online areas with top technicians who'll answer your questions; they also stock them with downloadable files — bug fixes, hints, and tips for troubleshooting. Some have vast online databases filled with previous Q&As or frequently asked questions (FAQ) lists. Others support end-user

Illustration by Jim Phillips

Return
Shift

bulletin boards, where you benefit from the accumulated wisdom of thousands of other users who may have had similar problems.

Getting Help on CompuServe

Among commercial online services, CompuServe has become the premier place to find answers to technical questions. Just about any company you can name has a support forum there.

In general, support forums have two components: messaging areas where you can post questions to technical-support professionals and other families who use the product, and areas where you can download files. The technical-support areas on CompuServe are Plus Services and cost $4.80 per hour for 1,200- or 2,400-bps access, or $9.60 per hour if you are connecting at 9,600 or 14,400 bps.

Ironically, the biggest problem you'll face in getting technical support on CompuServe is that there are too many places to look — over 800 at last count. With so much help sprawling over the massive service, it can be daunting to know where to go. Luckily, there's a central place that can help you find what you need: the Support Directory (Go `Support`).

Using the Support Directory, you can search for help in a number of ways. If you know the company that makes the product, you can search by company name. You can also search by the name of the product, the category of the product, or the operating system. Let's say you're looking for help using Micrografx's Amazing Art Adventure — you're having trouble printing. In the Support Directory on CompuServe, search for the company name Micrografx, and it'll return information on where to get support — in the Micrografx Section/Windows 3rd Party Application A Forum (Go `Micrografx`).

Once you get to the Micrografx forum, check out the message sections to see if anyone has had a similar problem (and answer). If not, post a message describing your problem in detail and asking for help. You'll likely get an answer to your question from a technician, the sysop, or another person who uses the program. The length of time you'll wait for an answer depends on several things, especially the popularity of the forum. Very well populated and staffed areas return answers to nonesoteric questions almost immediately; others may take a few hours or even a full day.

Online support is especially useful when the solution to your problem involves applying a software patch or bug fix. If a software publisher discovers its software has a bug of some sort, the company will often make a patch available. Usually, though, the publisher doesn't send this patch out; instead, people have to ask for it. Online support areas are a great way not only to find out about patches (before you hit the bug on your own) but also to download them.

For example, Maxis Software (makers of the SimCity series, El-Fish, and many other popular games) has an area on CompuServe (Go `Gambpub,area 8,Maxis`) where it provides technical support and posts software patches and other downloadable software. You'll find a patch to solve a problem when running El-Fish on a Pentium in high-resolution mode, and one to upgrade

FamilyPC Tip

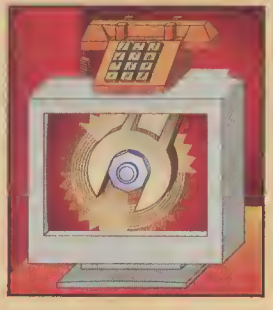
To make the most of your online time and keep down connect-time costs, do the same kind of prep work you would do before dialing up phone support. Write down information about the software that's giving you problems — especially the version, your registration number, and the version of the operating system you're using (such as Windows 3.1 or Macintosh System 7). If you have a hardware problem — with a sound card or modem, for example — write down information about it as well. The more specific you can be in an online query, the more likely it is that you will get the correct response.

If you're using a DOS/Windows PC, print out the contents of your CONFIG.SYS, SYSTEM.INI, and AUTOEXEC.BAT files, or copy them to a file you can paste into a bulletin-board message. You might not need all this information, but there's a good chance your software or hardware trouble is buried somewhere in these files. In any event, if you don't provide this information about your system, a technician may well respond to your online question by posting a question requesting it.

Online versus Hotline

For many technical problems, it may be better to log on than to dial up

When you need technical support, you can use a telephone hotline or an online service. Sometimes you'll want to log on; other times, you'll want to dial up. For example, online, lots of problems and solutions are readily available for you to browse in searchable databases or on bulletin boards. Online are bug fixes and software patches to download immediately, and simple ways to post the contents of your CONFIG.SYS, AUTOEXEC.BAT, and SYSTEM.INI files. So if you suspect your problem is common or requires a patch or bug fix, you may have better luck getting support online.



Also, if you browse online technical-support areas, you may come across solutions and software patches for problems you didn't know you had, such as a conflict between a sound-card driver and your favorite game.

But if you don't find the solution to your problem online right away or you aren't used to using your online service, or if you post a message to a sparsely attended board, you may have to wait much longer for an answer than you would ever wait on hold.

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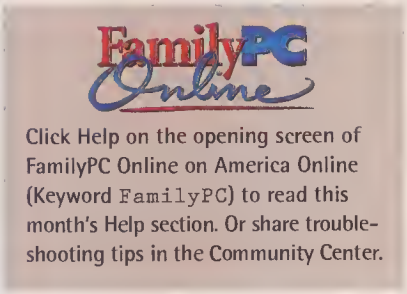
from an older version to a newer version of SimFarm. There's other software here as well, such as demo programs that let you see what software is like before buying it, as well as an add-on city for SimCity.

For help with Windows or any Microsoft product, be sure to visit the Microsoft Knowledge Base (Go MSKB), a database of over 35,000 articles about Microsoft products. It's a superb place to find documents that solve common (and not-so-common) problems with Microsoft and Microsoft-related products. Search by product name, product version, and operating environment, among other categories. (Note: while this area is helpful, it's not very easy to search. The same database is also available, with better search tools, on America Online. See below for more details.)



Click Help on the opening screen of FamilyPC Online on America Online (Keyword FamilyPC) to read this month's Help section. Or share trouble-shooting tips in the Community Center.

In addition to technical-support areas on CompuServe, you'll also find databases you can tap into to get help; however, they are generally too expensive for family use. For example, Support Onsite Online (Go Onsite) lets you search for answers to technical problems at a surcharge of $15 per hour ($0.25 per minute).

Tech Support on America Online

America Online doesn't have as much computer support as CompuServe, but you'll still find a healthy amount of help online. What you'll find varies: some companies have areas limited to bulletin-board help, while others add downloadable software, demo programs, downloadable help files, and even databases of answers to common technical questions. The technical-support areas on America Online are part of basic services and cost just $2.95 per hour — the basic cost of using the service.

When looking for help, the first thing to do is to head over to the Industry Connection in the Software area (Keyword Industry Connection), which is the umbrella under which all technical support on America Online can be found. You'll do far better trying to get help here than by wandering all around the service.

Once you're in Industry Connection, you need to find the company that can solve your problem. You can try looking through the list of companies, organized by category, such as Games, Multimedia, and Utilities. Choose what seems right, and you'll get an alphabetical list of companies with support areas on America Online. Another quick way to find what you want is to click on the icon for the alphabetized list of companies and then look for the company in that list.

If you click on the magnifying-glass icon that says Search for a Company, you can type in keywords that describe your problem and, based on that, get a list of companies that might have an answer. In theory, this should work great. In practice, though, it often proves less than useful. For example, recently I searched for the word *Broderbund*, and America Online turned up the company New World Computing. And when I searched for the word *Windows*, I got a list of companies, but, inexplicably, Microsoft was not on it.

If you have a Windows problem (and who doesn't?) or a question about one of Microsoft's many products aimed at home and children, head directly to the Microsoft support area. Don't go to the Microsoft Resource Center (Keyword Microsoft). The only useful online support for Microsoft on America Online is the Knowledge Base (Keyword Knowledge Base). Using it is simple: type a description of the problem you're having, and you get a list of articles that help solve the problem. Hint: be as specific as possible; otherwise, you'll drown in a sea of data. For example, when I searched on Windows and printing, I was deluged with a list of 696 articles. Fine-tuning the search to Printing and Creative Writer brought up a much more manageable list of fourteen articles.

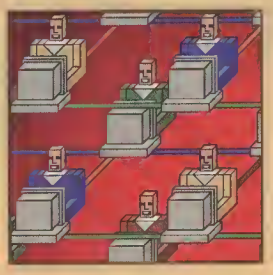
In fact, you'll find more than four dozen Creative Writer tips, hints, and warnings online. My daughter Mia and I actually found a clearly written tutorial on importing pictures into Creative Writer (and Fine Artist as well) — a nontrivial task. The Knowledge Base is pretty much all the technical support you'll get from Microsoft on America Online, though. There are no bulletin boards or other interactive forums available.

Brøderbund (Keyword Broderbund) has a much more robust online support

Tech Support on the Internet

You'll find techies galore on the world's largest internetwork

As a worldwide internetwork linking mainly techies and academics, the Internet tends to have computer-support information that's, well, techie and academic. If you have access to the Internet, check out the more than 600 Usenet newsgroups (electronic bulletin boards) with the prefix comp., and you'll



find everything from comp.ai (artificial intelligence) to comp.windows.advocacy. Families should focus their search on the dozens of comp.software, comp.mac, comp.windows, comp.os.msdos, and comp.os.ms-windows newsgroups. On America Online, Keyword Internet and click on Newsgroups. On CompuServe, Go Internet and click on USENET Newsgroups.

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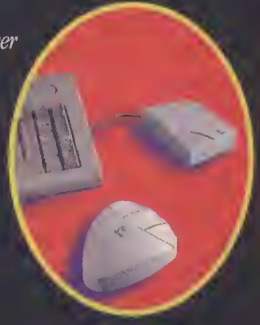

Radio receiver tucks away anywhere on the desktop.

LOGITECH

area that is a model of what good online technical-support areas should be. If you're like many families, you use at least one of Brøderbund Software's products, such as a Carmen Sandiego title, Myst, Print Shop Deluxe, or Kid Pix, and you'll want to check out this area.

For problem solving, head over to the three Product Support Boards: Customer Service, Game Hints, and Technical Support. Customer Service is the best place to go for information about software upgrades or for replacing defective disks or an early version that doesn't work properly. For example, as early Windows users of Myst know, there was a problem with version 1 of the CD (an incorrect clue). The Customer Service support board told people how to get the updated CD.

For most other problems, head over to the Technical Support board — a well-populated area that returns answers from other families as often as it returns them from Brøderbund technicians. For example, one customer solved a Myst problem himself and then posted a public message saying how he solved the problem (by updating a BIOS chip). This brings up an important point: don't merely post your question and wait for the answer; look through the board to see if the answer already exists.

There's a lot more to the Brøderbund area than just formal technical support. It also has files to download. For example, if your child wants to download graphics that others have created with Kid Pix, or post her own, she can click on the Kid Pix Trading Post and upload and download graphics. Finally, there's a software library where you can download all kinds of files — some are patches for programs; others are hint files or demos of new software releases.

Three other areas of technical support on America Online worth checking out are Disney Software, Davidson & Associates (which makes the very popular Math Blaster and other related programs), and, for general computer help, Kim Komando's Komputer Klinic.

When I checked in, Disney Software (Keyword `Disney`) was building a database of questions about its software; it appears this database will be similar to Microsoft's. It also has patches for downloading, technical-support boards, hints, and some graphics of Disney characters to download (when I last looked, The Little Mermaid and Jessica Rabbit were available). Davidson & Associates (Keyword `Davidson`) has message boards only; there is no database of questions and answers like Microsoft has, or patches and downloadable software like Brøderbund's.

Kim Komando's area on AOL (Keyword `Komando`) is a sprawling collection of FAQs, bulletin boards, live conferences, and help databases. Post questions to Leave Questions & Get Answers, or check out the responses in Good Answers to Common Problems — the two most useful bulletin boards in the area.

Giving Prodigy a Try

Prodigy is not necessarily the place to go to get tech support — it doesn't offer nearly as many hardware or software companies to help you as America Online and CompuServe do. And in general, what is available on Prodigy is not nearly as comprehensive as the information you'll find on the other services; you generally get bulletin-board support, but not much more.

There is some help, though. Like CompuServe and America Online, Prodigy has a single place you should go to before wandering off on your own. Manufacturers Corner (Jump `Manufacturers Corner`) is the place to begin searching support bulletin boards for major hardware system companies, such as Dell, Gateway, and IBM. These areas run much like similar areas on CompuServe and America Online — you post a question and wait for an answer from tech-support pros or from another user. Even so, these areas aren't as active as their CompuServe counterparts.

About the only software area on Prodigy worth looking into is the Software Support bulletin board (Jump `Software Support`). Here you can post questions about software for other Prodigy members who may have the answers you are looking for.

You can get help with IBM products such as the Ultima, PS/1, and ThinkPad products from the IBM Club (Jump `IBMCLUB`). An answer bank has answers to a number of questions about selected IBM hardware. There's also a bulletin board where you can ask questions of technical-support pros, as well as a download library for getting bug fixes.

The Computers area (Jump `Computers`) on Prodigy is filled with general productivity help. Click on Experts for general productivity tips from columnists. And check out Computer Basics for general help understanding how computers work.

Another place to check out on Prodigy is ZiffNet (Jump `ZiffNet`), which charges an extra monthly fee of $14.95 per month per member for up to three hours, or $7.50 per month per member for up to one hour. On ZiffNet, you'll find columns and news articles from Ziff-Davis magazines such as *PC Magazine*. The PC Workshop area is especially helpful, with help columns and articles, as well as free utilities to help you use your computer better. FPC

Preston Gralla *is a contributing editor to* FamilyPC. *He lives in Cambridge, Massachusetts, with his wife and two children.*

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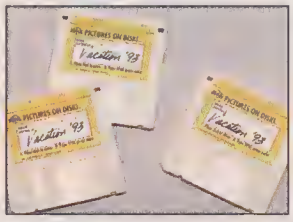

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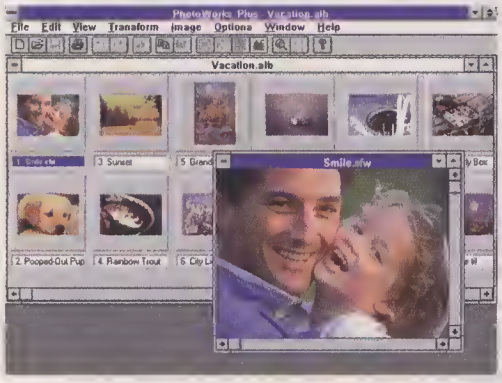

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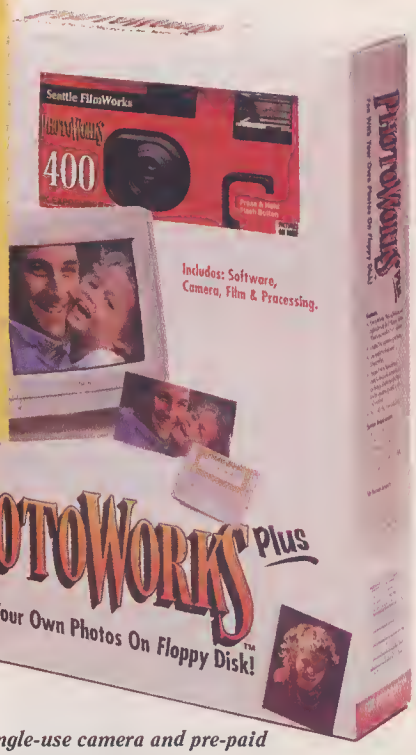

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SYSTEM REQUIREMENTS: PhotoWorks Plus for Windows requires an IBM-PC or 100% compatible, running Windows 3.1 or newer in 386-enhanced mode. Minimum 4 Mb RAM recommended. 10 Mb physical and/or virtual memory required. Requires 4 Mb hard-disk space.

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REVIEWS

HARDWARE AND SOFTWARE FOR FAMILIES

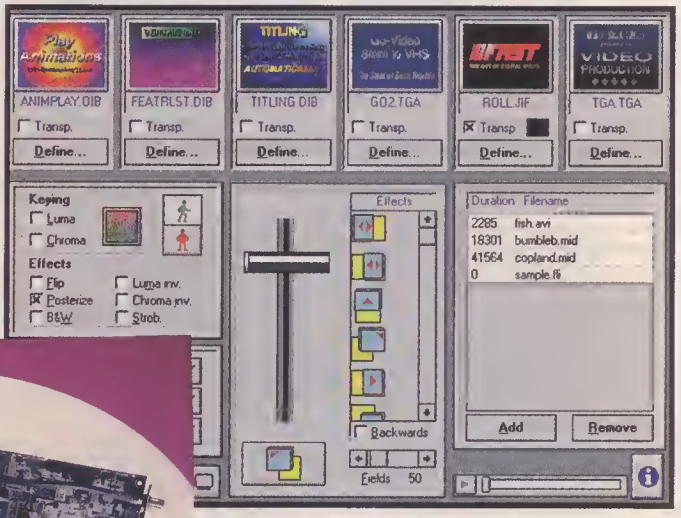
Video Editing with the PC

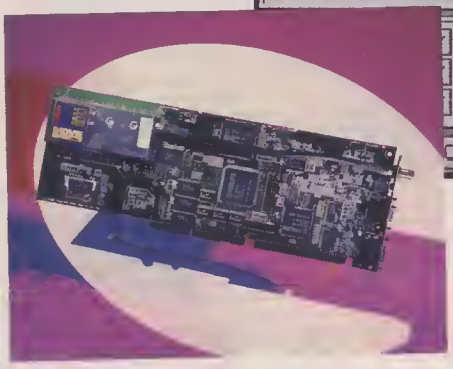
Making your home video into a masterpiece

CAMCORDERS WERE A GREAT INvention. They've given people a way to easily capture special moments forever on videotape. Unfortunately, those moments are always buried among lots of not-so-special ones. As a result, most camcorder owners record oodles of stuff but don't play it back much.

Now, however, an exciting new category of computer products is emerging that lets you edit your videos using the family PC, so you can dump all the blurry and boring footage and keep only the special moments. You can even unlock your creative potential by producing a family documentary or a promotional tape for your school or church, or let your teenagers go wild producing their own desktop MTV or even a movie. The possibilities are limited only by what you can capture on tape.

The process behind editing is simple. You take the original videotape as your *source*, and you output only the sections of tape you want, in the order you want, to a *destination* tape. This is how the professionals do it. But the products we look at here bring your computer into the middle of the process. You can either edit the video from deck to deck by letting the computer control all stops, pauses, and starts for both source and destination decks, or edit digitized video on your hard disk using provided software. This is different from using video-capture cards, where you just capture video to the hard disk in a form that can be played back; now you can actually control the video, frame by frame, and reorganize it in any order you want.





Movie Machine Pro Get the best of both worlds — digital and deck-to-deck editing — with this product.

These products produce second-generation (lesser quality than the original) video at best — though the digital products produced excellent quality even after the video was recorded to the hard disk. Your finished tape may not be of broadcast quality, but it will be good enough for repeated home viewings.

In this article, we've rounded up four easy-to-install home-desktop video products that span a wide range of prices and features. All four editors work with Windows.

Your choice will depend on your budget, your system, and your interests. A deck-to-deck solution provides average image quality but doesn't require a very high-end system; a digital video solution needs a powerful system and an incredibly large hard disk, depending on the amount of video work you'll do, but it will put you on the cutting edge of video editing.

What the FamilyPC Ratings Mean

★★★★ Flawless

★★★½ Recommended

★★★ Good

★★½ Needs work

★ Woeful

Movie Machine Pro

FamilyPC Rating ★★★★

Among these four video-editing products, you'll pay the most for Movie Machine Pro — but you'll also get the most features. It manages to deliver the capabilities of deck-to-deck and digital video editing in the same card. It has more features, more special effects, more everything — for example, it's the only one of these products that gives you true Chroma-key, the effect on the news that allows a certain color to be replaced by another source. (This is how a TV weather map is projected while the weather reporter is actually standing in front of a blank, green screen; Chroma-key replaces the green with a video image of the map.)

This impressive PC add-in card includes a cable-ready TV tuner, so you can watch TV on your screen and then save TV clips on your hard disk. You can also plug in a camcorder or VCR and record from it to your hard disk. You can add titles, computer

Photographs by Lightworks Photographic

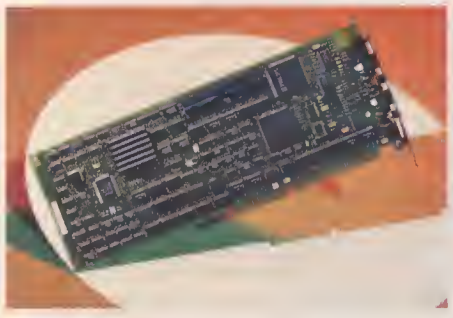
graphics, or any image from almost any Windows application and import it into Movie Machine Pro to combine with your video clips. Movie Machine Pro lets you edit the clips on your hard disk and record them back onto your camcorder or VCR, just as the MiroVideo DC1 does (see next review).

Movie Machine Pro's versatility extends to its ability to control external video decks in the same way as Video Director or Personal Video Studio. It thus gives you the best of both worlds, allowing you to decide when it's best to edit on your hard disk and when to edit the actual tapes.

The quality of your final tape depends on how you edit the tape, as well as on the quality of your source. If you use the deck-to-deck editing method, you get second-generation tape when copying to the destination deck. If you use the digital editing method, you may actually produce a slightly higher-quality finished tape, provided your computer has the horsepower (66-MHz 486 or better) to output your digital video at full resolution.

Movie Machine Pro saves video on your hard disk as Video for Windows (.AVI) files, which means you can use either its excellent editing software or any Windows program that works with .AVI files, such as Adobe Premiere.

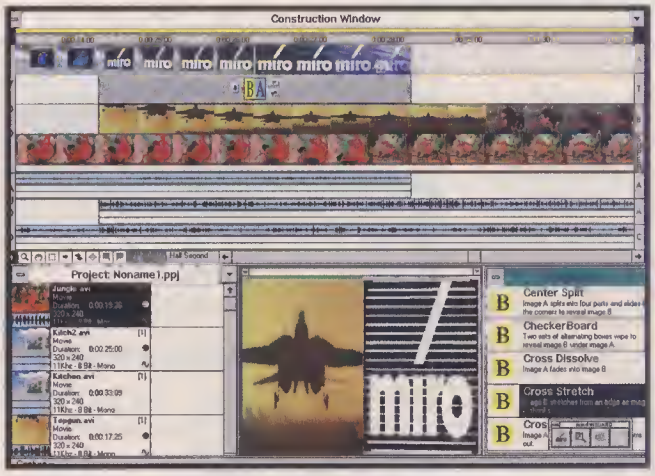
Movie Machine Pro, Fast Electronic U.S., Inc., 800-249-3278 or 415-802-0772; **$999.**



MiroVideo DC1 This card lets you capture video to your hard disk digitally — the future of video editing.

MiroVideo DC1

MiroVideo DC1 is the one digital-video-only editor we looked at, and it's an outstanding piece of work. This add-in card does not control videotape decks; instead, it plugs into your PC and lets you record the videotape clips directly onto your hard disk. Although this consumes many megabytes of hard disk space — from 25MB to 30MB per minute of video — it has several advantages.



The video clips are converted into digital Video for Windows (.AVI) files. The card uses a compression technology called Motion JPEG so these clip files can run at full screen, full motion, in 24-bit color.

FamilyPC Rating ★★★★

Because the files are digital, you can jump instantly to any frame, without waiting for a tape to rewind or fast-forward. In addition, you can apply an almost-endless number of special effects (depending on what editing software you use), because the digital files — as opposed to the analog videotape — can be manipulated much more powerfully. How powerfully, however, is equally dependent on your system's power: you need at least a 486DX/33.

You only need to connect the board to a single camcorder or VCR, not both a source deck and a destination deck. You just record the video segments you want to edit onto your hard disk, edit them through the software, and then copy the finished production back onto the same deck. Because of the MPEG compression, image quality is outstanding when the clip files are copied to the destination deck. After you finish editing, you can then erase the files from your hard disk, reclaiming the disk space.

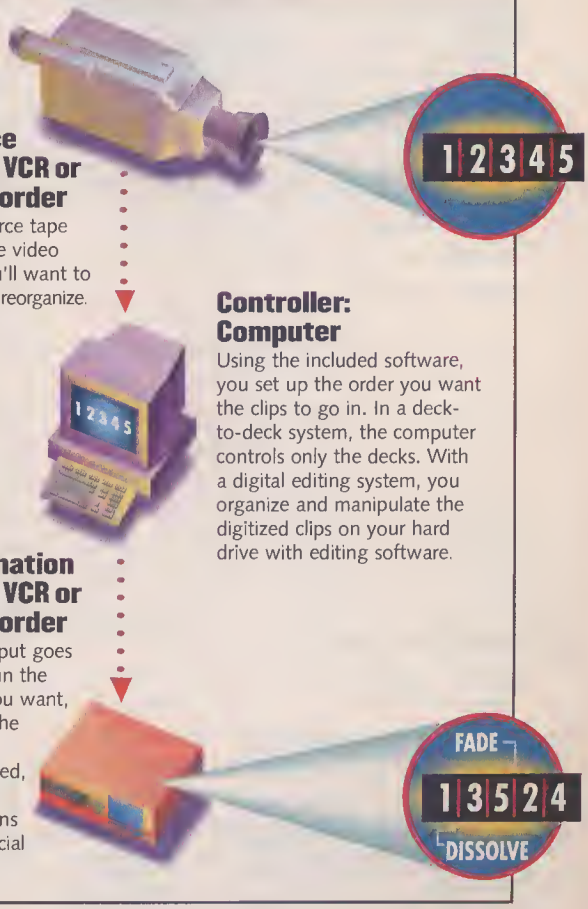
The MiroVideo DC1 comes with Video Studio software from Ulead for

Digitizing Your Memories
MiroVideo ships with Adobe Premiere — the leading digital video editor on the market.

editing your videos on-screen. For an additional $100, you can upgrade to a version that includes Adobe's excellent Premiere video-editing software — a $695 value. And since you are working with digital .AVI files, you can use any other video-editing/special effects package, from titling to morphing, and incorporate the package's capabilities into your final project. This package does far more than merely clean up your vacation videos: if you have the creativity, your videos may actually get the family lining up to view them.

MiroVideo DC1, Miro Computer Products, 800-249-6476 or 415-855-0940; **$599** with Adobe Premiere; **$499** with Video Studio.

EDITING MADE EASY



Video Director 2.0

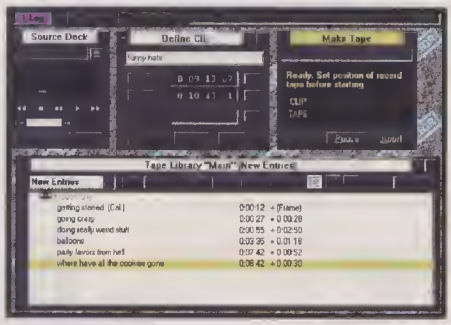
If you're looking for an inexpensive, easy way to get started editing video, Video Director is the ticket. With a street price well under $200, Video Director offers sophisticated software and a stunningly simple but effective cable. You plug one end of the cable into your PC's serial port. The other end splits into a *Y*, with two kinds of connectors. One resembles a standard earphone jack and plugs into the Control-L or LANC connector (found on most 8mm or Hi8 camcorders) on a source deck. The other contains an infrared transmitter that can issue the remote-control codes for most standard VCRs, enabling your VCR to serve as destination deck. You then connect the output of the source deck to the input of the destination deck — the video signal does not pass through your computer.

FamilyPC Rating ★★★½

Video Director These simple cables allow you to transfer your video in the order you want.

No video is actually recorded into your computer, so it doesn't take up any space on your hard disk. In fact, since the decks do the main work, you don't even need more than a 386. Also, you view the videotapes on your TV or camcorder viewfinder, not on your monitor, so Video Director doesn't require special video hardware.

During the editing process, you use the Video Director software to match to tapes on your source deck. You click buttons on your computer screen at the beginning and end of each segment of tape that you want to save for your final edit. Once you've identified all the segments, you can name them and rearrange them in the sequence you want by dragging and dropping them in the required order. The software then does all the rewinding, stopping, and starting as it copies just the clips you want, in the order you want them, onto the destination deck. This is a great way to get simple edits of your videotapes; note, though, that Video Director doesn't provide any extras, like graphics or special effects.



Directing the Video The software with Video Director lets you reorganize your video, clip by clip.

Video Director, Gold Disk, Inc., 800-982-9888 or 408-982-0200; **$199.95.**

Personal Video Studio

Personal Video Studio comes in a card that plugs right into your PC and offers the capabilities of an analog video-editing system, but controlled through any Windows PC. Though the card is a deck-to-deck video editor, you can incorporate computer graphics, color titles (using any of your TrueType fonts), and special effects into your video presentations using the included software. You can even use two decks as inputs — for example, input video from a laserdisc player as well as from a camcorder or VCR. Two audio channels let you add music for a sound track and provide your own narration. The card even comes with an instructional videotape on how to set up the system.

Like Video Director (see review), Personal Video Studio lets you tag the beginnings and ends of scenes on a source deck and then assemble the clips in the order you want on a destination deck. The problem is, Studio Magic doesn't include the special cable needed for controlling decks using the Control-L/LANC connector. You either have to do all the rewinding and playing back manually or, for an extra $199.95, buy Studio Magic Controls (which consists of a half-size plug-in card and deck-control cables).

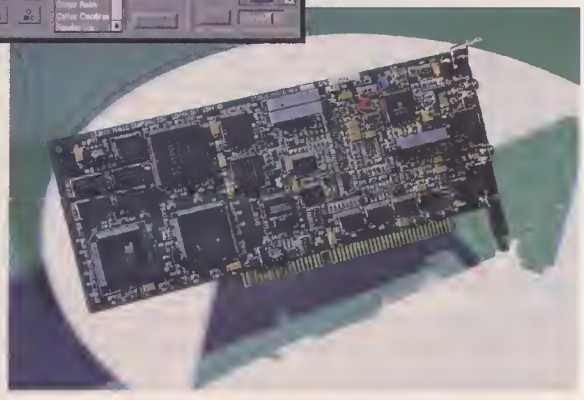
Personal Video Studio allows you to tinker with fancy TV studio–style transitions, such as wipes, or to pick from a grab bag of special effects. You can even create your own library of special effects for repeated use. The special effects are set up through the software, where you can also coordinate the use of computer graphics (you can even place live video over a still computer graphic), color backgrounds, and title text overlays. All of these can be previewed in thumbnail-size images through software before you ever record anything to the destination deck.

FamilyPC Rating ★★★

As with Video Director or the other deck-to-deck editing solutions, Personal Video Studio's destination tapes are second-generation quality.

Unfortunately, without control of the decks through software, Personal Video Studio is more difficult to use than it should be — and the extra price you have to pay to get that control is made worthwhile only by the inclusion of several options.

Personal Video Studio, Studio Magic Corp., 800-314-6244 or 408-378-3838; **$499.95; Studio Magic Controls, $199.95.**



Personal Video Studio An easy-to-install card that provides complete video control, plus effects and titles.

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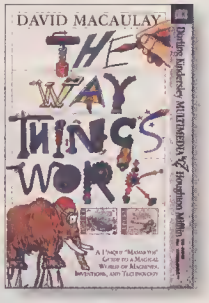

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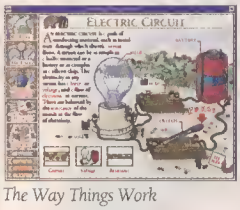

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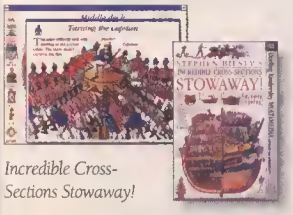

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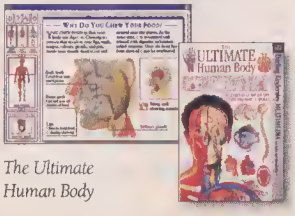

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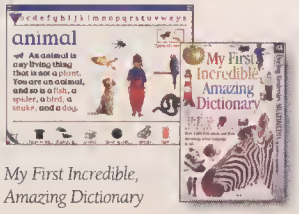

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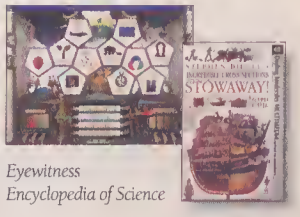

Eyewitness Encyclopedia of Science

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AcerPower P90 An easy-to-set-up system with everything you'll need.

AcerPower P90 Minitower

Big, easy to use, and Pentium power

FOR $2,899 (ACER'S ESTIMATED street price), the AcerPower P90 Minitower includes everything you could possibly need for computing in extra-large helpings.

While the price may seem high, consider the system's impressive hardware credentials: a Pentium 90, 8MB of RAM, an 810MB hard drive, 64-bit PCI (Peripheral Component Interconnect) graphics for better video performance, and a 15-inch monitor. For multimedia, you get a double-speed CD-ROM, a 16-bit sound card, and a pair of speakers. For communication, Acer provides a 14.4-kbps internal multifunction fax/voice-mail modem, along with starter kits for America Online, Prodigy, and even the Internet. The mini-tower design also helps with the system's expandability. Microsoft Encarta, Golf, and Quicken are among the nine bundled software packages.

Perhaps the AcerPower P90's most interesting (and helpful) aspect is the "out-of-box experience." Software, manuals, and other paraphernalia are packaged and clearly labeled in logical groups. Upon opening the box, you're greeted with a large poster that takes you step-by-step through the process of unpacking and setting up the machine. Acer also gives you the opportunity to register your computer electronically.

FamilyPC Rating ★★★★

Once you're up and running, ACE (Acer Computer Explorer) takes over. ACE lets you easily run software and configures various aspects of your PC. The interface insulates you from the idiosyncrasies of Windows' Program Manager, though you can get to it at any time.

There's a lot to like about the Acer, but some areas need improvement. The included speakers provide unimpressive sound, and performance was much slower than the similarly configured Micron machine. These are minor complaints, however, considering what you do get. The combination of components and software provides a lot of value for your money (even this much money). That, combined with the thoughtfully designed packaging, makes the AcerPower P90 Minitower a machine worth more than consideration: it's worth purchasing.

AcerPower P90 Minitower, 90-MHz Pentium, 8MB of RAM, 810MB hard drive, 15-inch monitor; Acer America Corp., 800-368-2237, 408-432-6200; **$2,899** Acer estimated street price.

Micron P90 Home MPC

Lots of power and a low price

YOU MIGHT EXPECT THE MICRON P90 Home MPC, at the low price of $2,499, to cut corners. To be sure, the mini-tower Pentium-based Home MPC is not as full-featured as the AcerPower P90 Minitower (smaller hard drive and monitor), but the Acer costs $400 more. The Micron does provide everything you'd expect, just a bit less of it — except speed, which it has in abundance.

The Home MPC comes with 8MB of RAM, a 256K cache, and a 527MB hard drive (compared to the Acer's 810MB). Micron adds a Sound Blaster 16 sound card, a double-speed CD-ROM drive, stereo speakers, a 14.4-kbps fax modem, a 14-inch monitor, and a ThunderStick joystick.

Besides a trio of LucasArts games, Micron bundles Microsoft Works and Encarta, Quicken, and trial subscriptions to America Online, CompuServe, and Prodigy (much like the AcerPower).

The system ships with Phoenix's Home Office interface software. This Windows front end uses an office desktop metaphor; clicking on an object in the office starts a corresponding application or task. For example, clicking on the calculator starts the spreadsheet; clicking on the phone starts the communications software. This approach, while novel, is not as intuitive as it seems. It ultimately does little for ease of use and at times is downright confusing; but it is easy to get past.

FamilyPC Rating ★★★½

For the future, the unit has a Plug-and-Play-upgradable BIOS chip (the chip that starts up your computer). This should make installing new hardware in the machine an easy chore once you get the chance to upgrade to the new Windows 95 (see Keeping Pace in our January/February issue).

The Home MPC's main weaknesses are its hard drive and monitor. The 527MB drive is a little too small for today's applications. And while a 14-inch monitor is adequate, 15-inch models are fast becoming the standard. Still, at this aggressive price, the Micron P90 Home MPC is a great way to introduce or improve computing in your household.

Micron P90 Home MPC, 90-MHz Pentium, 8MB of RAM, 527MB hard drive, 14-inch monitor; Micron Computer, Inc., 800-400-6750 or 208-463-3434; **$2,499** direct sales only.

Micron P90 Home MPC An intriguing mix of high performance and low price.

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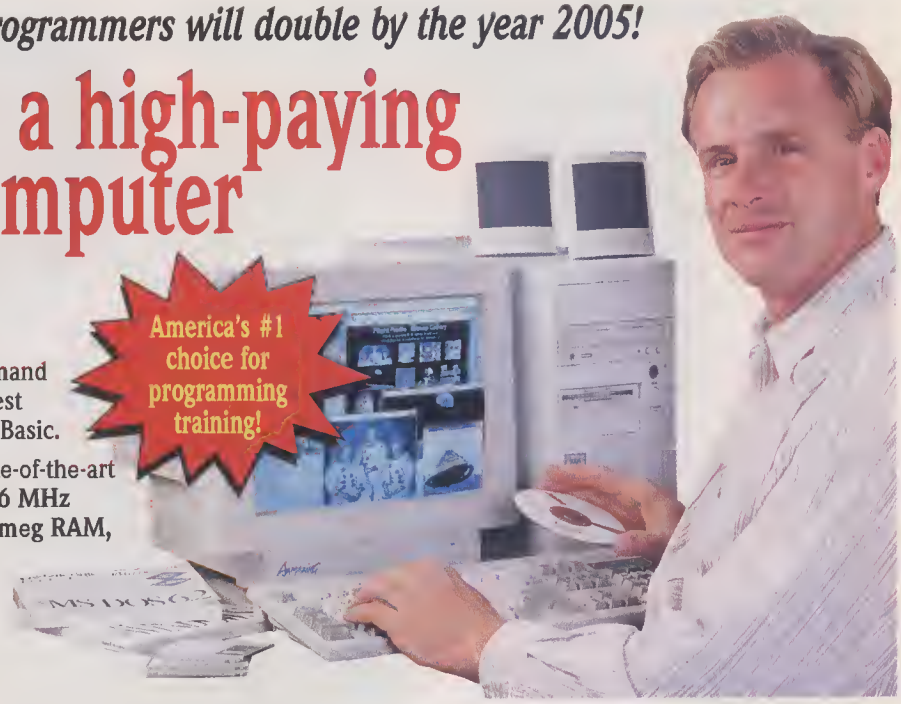

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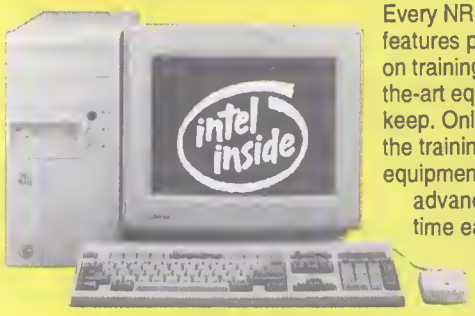

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AcerPower P90 Minitower

Big, easy to use, and Pentium power

FOR $2,899 (ACER'S ESTIMATED street price), the AcerPower P90 Minitower includes everything you could possibly need for computing in extra-large helpings.

While the price may seem high, consider the system's impressive hardware credentials: a Pentium 90, 8MB of RAM, an 810MB hard drive, 64-bit PCI (Peripheral Component Interconnect) graphics for better video performance, and a 15-inch monitor. For multimedia, you get a double-speed CD-ROM, a 16-bit sound card, and a pair of speakers. For communication, Acer provides a 14.4-kbps internal multifunction fax/voice-mail modem, along with starter kits for America Online, Prodigy, and even the Internet. The mini-tower desig helps with the system's expandabili crosoft Encarta, Golf, and Quicken are the nine bundled software packages

Perhaps the AcerPower P90's m teresting (and helpful) aspect is th of-box experience." Software, manua other paraphernalia are packaged and labeled in logical groups. Upon o the box, you're greeted with a large that takes you step-by-step throu process of unpacking and setting

FamilyPC Rating ★★★★

machine. Ac gives you the tunity to re your computer electronically.

Once you're up and running, ACE Computer Explorer) takes over. ACE l easily run software and configures v aspects of your PC. The interface in you from the idiosyncrasies of Wi

AcerPower P90 An easy-to-set-up system with everything you'll need.

Program Manager, though you can get to it at any time.

There's a lot to like about the Acer, but some areas need improvement. The included speakers provide unimpressive sound, and performance was much slower than the similarly configured Micron machine. These are minor complaints, however, considering what you do get. The combination of components and software provides a lot of value for your money (even this much money). That, combined with the thoughtfully designed packaging, makes the AcerPower P90 Minitower a machine worth more than consideration: it's worth purchasing.

AcerPower P90 Minitower, 90-MHz Pentium, 8MB of RAM, 810MB hard drive, 15-inch monitor; Acer America Corp., 800-368-2237, 408-432-6200; **$2,899** Acer estimated street price.

Micron P90 Home MPC

Lots of power and a low price

YOU MIGHT EXPECT THE MICRON P90 Home MPC, at the low price of $2,499, to cut corners. To be sure, the mini-tower Pentium-based Home MPC is not as full-featured as the AcerPower P90 Minitower (smaller hard

tions to America Online, CompuServe, and Prodigy (much like the AcerPower).

The system ships with Phoenix's Home Office interface software. This Windows front end uses an office desktop metaphor; clicking on an object in the office starts a corresponding application or task. For example, clicking on the calculator starts the spreadsheet; clicking on the phone starts the communications software. This approach, while novel, is not as intuitive as it seems. It ultimately does little for ease of use and at times is downright confusing; but it is easy to get past.

FamilyPC Rating ★★★½

For the future, the unit has a Plug-and-Play-upgradable BIOS chip (the chip that starts up your computer). This should make installing new hardware in the machine an easy chore once you get the chance to upgrade to the new Windows 95 (see Keeping Pace in our January/February issue).

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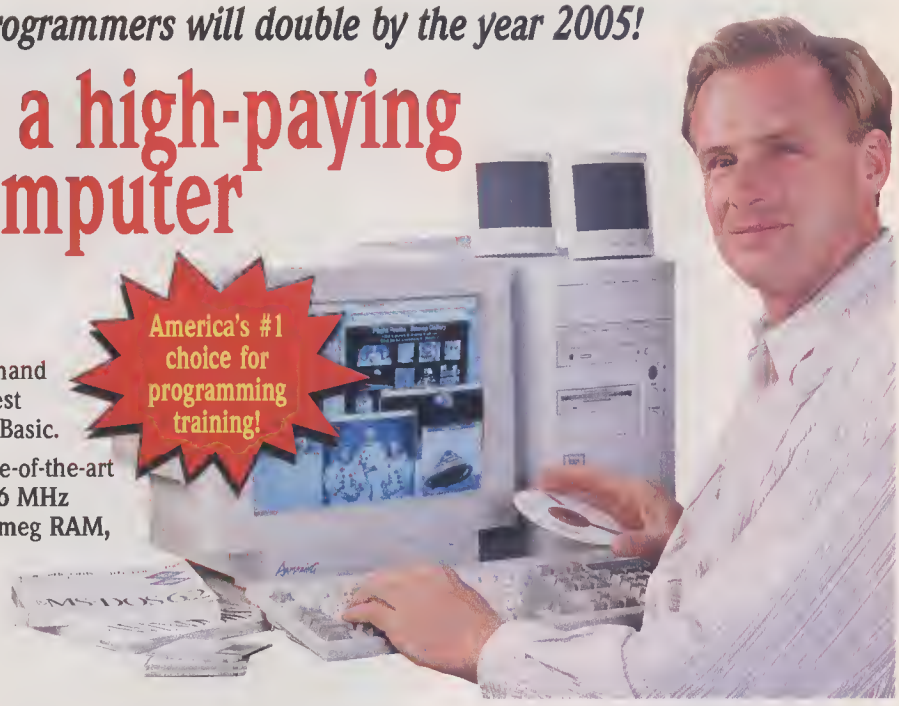

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Digital Cameras

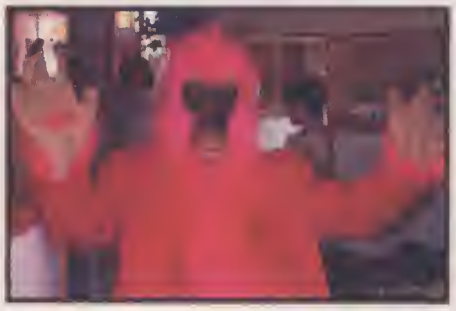
A snap (shot) to use

THE DIGITAL WORLD, THANKFULLY, continues to encroach on the old ways of doing things. The days of struggling to get a photo into your system are over. Now you can hook up a camera directly to your PC.

These cameras place the pictures into memory that you load on your computer and store on your hard disk. All the cables and software you need to download your photography are included. With just the briefest explanation, anyone in your family can operate these cameras with ease.

While neither delivers the quality of a 35mm snapshot, their ease of use makes them perfect for family gatherings or placing images in a newsletter. Better yet, you don't have to wait to get photos developed.

Instant Photographer Even this monkey could handle a digital camera.



Apple QuickTake 100

Lightweight, easy to use, and high-quality, the Apple QuickTake 100 can add instant fun to your computing. This digital color camera operates like a conventional point-and-shoot camera. There is almost no learning curve.

FamilyPC Rating ★★★★

Apple includes three rechargeable batteries and a charger to power the camera, along with a neck strap, a cable to connect the camera to your computer, and all necessary software for Mac or Windows (depending on what platform you buy for; a connection kit for the other platform is $99). The camera has automatic focus and exposure, a timer, and an automatic flash.

Turning the camera on is a snap: simply slide back the lens cover, and you're ready to go. An LCD panel shows the number of pictures taken (up to thirty-two 24-bit [16.7 million colors] pictures), the flash status, and even battery power left. You can press a button to switch to high-resolution (640 by 480 pixels) mode; however, the camera stores only eight pictures with this setting.

Once the pictures are in your computer, you can use the provided software or other image-processing software to alter the images and print them out to any color or black-and-white printer. The overall quality is quite good.

At close to $700, the QuickTake is expensive, but for convenience and pure fun, it's tough to beat. If you can afford one, you'll find endless applications for taking color digital pictures and transferring them easily into your PC or Mac.

Apple QuickTake 100, Apple Computer, Inc., 800-538-9696 or 408-996-1010; **$690** street for Mac or Windows (**$99** for second connection kit).

The Apple QuickTake 100
The next stage in photography — digital — can be yours at home.

Logitech FotoMan Plus

Logitech FotoMan Plus is an easy but fairly expensive way to get photographs into your family PC. A simple but well-made digital camera, FotoMan can take and store up to thirty-two pictures at a time — though only in black and white.

Logitech ships the FotoMan Plus with the company's own image-editing software and a cable that connects the camera to your PC's serial port. (A Mac version is also available.) The software lets you download photographs directly from the camera to the PC and clear the camera's memory so you can take new pictures. Once the images are on your computer's disk, you can preview them in thumbnail form and apply editing operations using the included FotoTouch software (or other image-editing software).

FotoMan Plus is beautifully designed; you can hold the camera and take photos with just one hand. An automatic flash is built in, so you need only point at your subject and click.

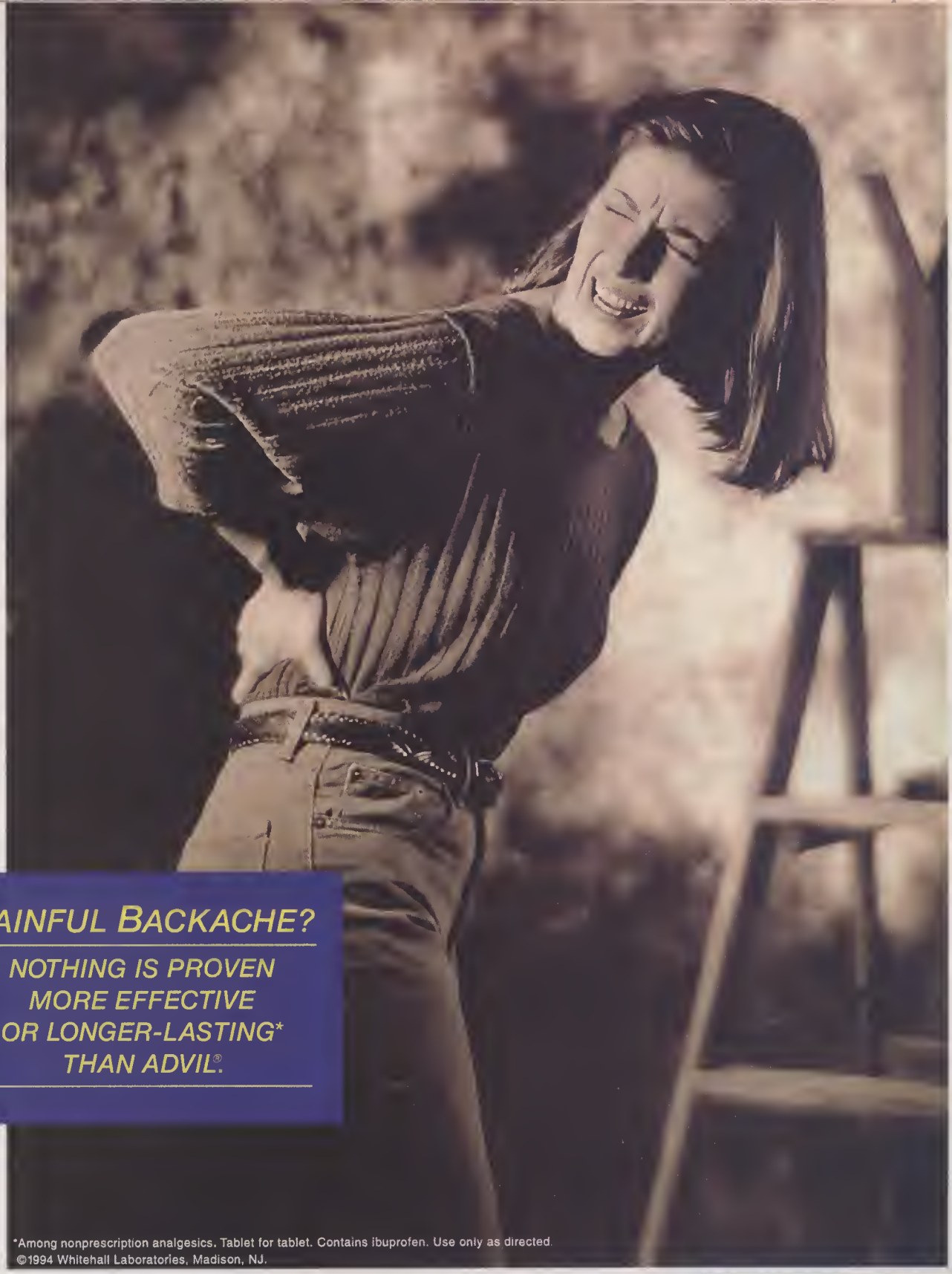
FotoMan Plus has an internal rechargeable battery that runs for up to 100 hours on a charge. The unit can operate with a wide range of optional accessories, like macro or wide-angle lenses and filters. The image quality of the photographs is good, although it won't make you want to give up your Nikon — or even any of the many point-and-shoot cameras. Despite its limitations, however, FotoMan offers plenty of possibilities for family and home-office use.

FamilyPC Rating ★★★

Though FotoMan's price is high, street prices (around $565) might make it more attractive. If you're looking for a PC accessory that is fun, simple, and different, at that price FotoMan could well be it.

Logitech FotoMan Plus; Logitech, Inc., 800-231-7717 or 510-795-8500; **$799.**

FotoMan Plus It's remarkably easy to take and "develop" black-and-white photos of family and friends.



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ADVANCED MEDICINE FOR PAIN™

Globalyst 360TPC

Say good-bye to your telephone?

AT&T Global Information Solutions' Globalyst 360TPC may not be the most powerful (or, at $2,199 for a 66-MHz 486DX2, the least expensive) new system to come along, but its Computer Telephony Integration (CTI) makes it more than a mere PC. Your family will no longer need a fax machine, modem, answering machine, or even telephone on the desk. This multimedia computer meets all your telecommunications needs.

FamilyPC Rating ★★★½

At the heart of the 360TPC lies the Personal Communications Center interface. Acting as a switchboard to multiple mailboxes, the communications center automatically recognizes and routes faxes and phone calls through the internal fax/voice-mail modem; records, stores on the hard drive (at about 256K of space for one minute), and plays phone messages; and lets you screen incoming calls.

Comm Central The Globalyst stores all your messages.

AT&T's fax/voice-modem board uses a 32-bit digital signal processor (DSP) chip to relieve the Globalyst's 486DX2/66 processor of most communications-based computation. A set of crisp-sounding speakers house a full-duplex speakerphone, so both parties on a call can talk without interruption.

The Globalyst ships with a double-speed CD-ROM player, 8MB of RAM, and a 420MB hard drive. The display is limited, however, to 256 colors even at lower resolutions.

AT&T preloads Quicken, PFS WindowWorks, QAPlus Diagnostics, SideKick, and five front ends for online services. The CD bundle includes an AT&T 800-number directory, a AAA Trip Planner, a Brøderbund Living Book, and Compton's Encyclopedia.

If you want a centerpiece for your home office that will handle all your communications chores, the AT&T Globalyst 360TPC is the right number.

Globalyst 360TPC, 486DX2/66, 8MB of RAM, 420MB hard drive, 15-inch monitor; AT&T Global Information Solutions, 800-637-2600 or 513-445-5000; **$2,199** (**$1,899** without monitor).

Globalyst 360TPC This system meets your family's communications needs.

AST Advantage An all-in-one, affordable PC that handles phone calls, faxes, and more.

AST Advantage Adventure 4066d

Multimedia with integrated telephony

The AST Advantage Adventure 4066d is a solid family PC. This 486DX2/66-based PC functions as both a full-featured multimedia computer and a home messaging center able to answer your calls, manage multiple voice-mail boxes, forward your faxes, and even read you your schedule from the bundled Lotus Organizer when you call in from a remote location. With a user-friendly interface and extensive help facilities, the 4066d is a good starter system, though its performance is not world-class.

FamilyPC Rating ★★★½

The Advantage puts 8MB of memory, a 420MB hard drive, a high-quality 14-inch display, a wave-table sound card, speakers, a microphone, an integrated 14.4-kbps fax modem, and a substantial software bundle into a single easy-to-set-up unit. You simply take the system out of the box, attach the mouse and keyboard, plug the modem into your phone jack and your phone into your modem, attach the power cord, and turn it on. The installation took about five minutes; kudos to AST for its one-page installation guide.

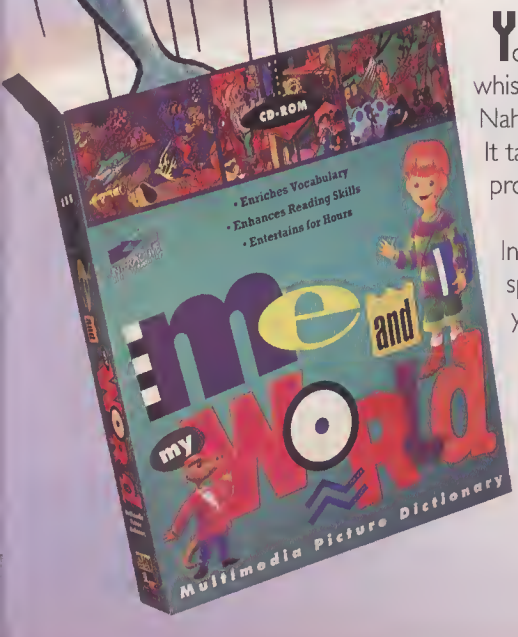
The performance of the Advantage I reviewed was a little below average for a 486/66 computer. The display, however, was sharp and rock-steady. The one-piece design that makes setup so easy also limits the number of expansion devices you can add to the system, but this shouldn't be much of a concern, since the computer comes fully loaded with all the hardware you'll need. The placement of controls — including a volume and mute control — is good, as is the location of the CD-ROM drive door, which just clears the keyboard when open.

The Advantage comes with AST Works, a program that provides a more logical way to organize and launch your software programs than that provided by the Windows Program Manager. Works' main failing is that customizing it isn't as simple as using it. Despite its ease of use, Works is a nonstandard interface, which can cause confusion if you use a different machine at work or school. However, Program Manager is just a mouse click away.

The AST Advantage Adventure 4066d is a good hardware and software package that can get you into multimedia computing faster than other 486s can. It is a bit pricey to be considered a good value, but its features make it quite suitable for novice buyers.

AST Advantage Adventure 4066d, 486DX2/66, 8MB of RAM, 420MB hard drive, 14-inch integrated monitor; AST Research, 800-876-4278 or 714-727-4141, **$1,799.**

Cleverly disguised behind dancing crayons, flying fruit, singing sea horses and laughing pandas is a revolutionary vocabulary builder for your kids.



Your child starts talking to you about rabbits kissing, mushrooms whistling and airplane wings turning into sardines. Too much sugar in their diet? Nah. It's all part of *Me & My World,* our remarkable new CD-ROM picture dictionary. It takes vocabulary enrichment and reading skill enhancement to a new level by providing hours of interactive fun.

Meet Timmy. He'll gladly guide your kids through 18 everyday experiences. In each scene, your kids click on objects and the words for those objects are spoken aloud. What follows is wildly creative animations that are so entertaining your kids will beg you to keep playing. Which means they'll keep learning.

For more information, or to order this out-of-this-world educational tool, call the 24-hour *Me & My World* hotline at **(800) 472-8777** or visit your local retailer. And the next time your kids tell you about strawberries turning into ladybugs, relax. It's all part of learning — very cleverly disguised.

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ArtPad The best tablet made for the family — period.

ArtPad

For drawing, nothing comes close

NO TWO WAYS ABOUT IT: IF YOU or your children are artistic with your PC, and you are willing to spend just under $200 for a drawing device that has a more realistic feel than a mouse, get an ArtPad. Wacom's latest entrant in the pressure-sensitive graphics tablet arena is a superb tool that draws circles around the competition.

ArtPad uses a full 256 levels of pressure to mimic real-life writing and drawing (push harder for thick lines; use less pressure for light lines), using Wacom's UltraPen — a wireless, batteryless pen that feels exactly (not *sort of*) like your favorite pen. Add to that a drawing tablet surface that is silky smooth yet light enough to sit comfortably in your lap, and you have a combination for every type of drawing (or even for navigating around your computer). The product is also available with Fractal Design's Dabbler paint software for about $40 more.

FamilyPC Rating ★★★★½

The ArtPad has a simple five-minute setup. Just insert the disk and install the control-panel software. Turn off the machine, plug the device into the port (ADB port on the Mac, serial port on the PC), and restart.

You can easily customize how your pen and tablet function, including the sensitivity of the tip (in case you have a light or heavy touch) and the live area of the tablet surface (for pointing and clicking ease), and you can even assign a variety of functions to a side button mounted on the pen. (This feature is particularly handy for locking in a level of pressure that you might want to maintain in a paint program.)

One minor drawback to the ArtPad is that the drawing surface is only 4 by 5 inches (the entire unit measures 7 by 7½ inches and is a quarter-inch thick); if you want to trace an existing piece of art, it must be smaller than 4 by 5 inches or reduced to that size.

That's a small price to pay for such a smooth operating tool. Don't be surprised if this little device makes a home for itself next to your PC.

ArtPad, Wacom Technology Corp., 800-922-6613; **$199, $239** with Fractal Design's Dabbler.

Lexmark WinWriter 200

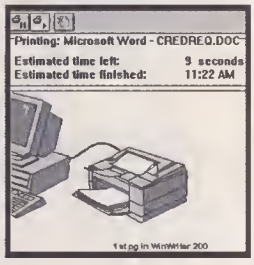
Communicating with your printer

AT LESS THAN $500, THE WINWriter 200 is one of the most affordable laser printers around. It offers outstanding 300-dot-per-inch print quality and prints about twice as fast as the average ink-jet printer (about 6 pages per minute in our tests). And to make it even more attractive, it uses the Microsoft Windows Printing System, so when the Windows software on your PC is updated, the printer is updated as well.

WinWriter 200 Six pages per minute at less than $500 equals a great deal.

With its well-illustrated user's guide and step-by-step instructions, the WinWriter is easy to set up. Unlike many printers, it lacks a quick-start guide, but it does provide the simplicity of having just one manual. Unfortunately, like most printers, the WinWriter 200 doesn't include its own parallel cable to connect it to the PC; you'll need to purchase that separately. (If you order a WinWriter through the mail, try to get the vendor to throw one in for free.) The WinWriter does include a 150-page sheet feeder, as well as a 3,000-page toner cartridge that will last the average family two years or more but does not come installed.

FamilyPC Rating ★★★★



No Loitering WinWriter's printing-status window announces when printing is done.

Installing the software was a breeze. It includes the printer driver, twenty-two additional TrueType fonts, and sounds that tell you when printing is done and report error messages. The Express Install requires about 4MB of hard disk space, but you can choose not to install everything if you're tight on disk space.

The WinWriter makes its differences known almost immediately using the built-in Microsoft Windows Printing System technology. Not only will the computer tell you what's up with the printer, but a status window pops up during printing showing you how long the job will take to print.

One drawback we noticed was a tendency for printed documents to curl pretty severely, causing a pile-up in the paper exit tray. It's nothing that an overnight on a flat surface won't cure, however.

Laser printers with street prices under $500 help make it a lot easier to make the decision to buy one. And the WinWriter 200's ease of use from the Microsoft Windows Printing System technology makes the decision easier still.

WinWriter 200, Lexmark International, 800-358-5835; **$579.**

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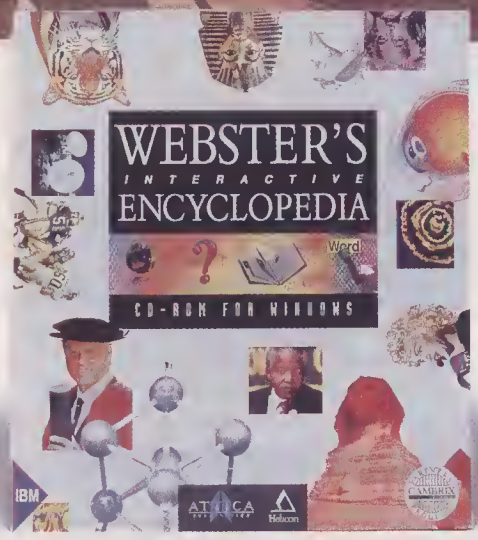
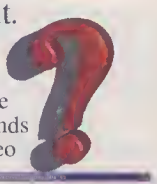
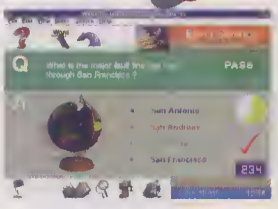


Test your worldly knowledge with the *Quiz*, where thousands of questions (some with video clips or sound tracks) provide unlimited fun — and learning.





The globe brings up a World Atlas with three levels of zoom. Click on areas or cities, and access related articles, video clips and other aids.

Using the *Topics* tool, you can see what's available on subjects like History, Nature, Science, Technology, Popular Culture, Business and plenty more.

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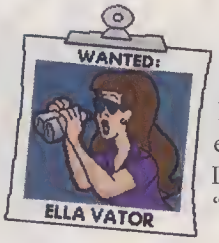
Where in the World is Carmen Sandiego?

Junior Detective Edition



CARMEN SANDIEGO, THAT WILIEST of thieves, is on the loose again, and this time young gumshoes get a shot at taking her down.

In Where in the World is Carmen Sandiego? Junior Detective Edition, five- to eight-year-olds use memory and matching skills to track down the elusive gang of thieves who have been stealing treasures from all over the world. Along the way, ace investigators will learn a great deal of geography.

FamilyPC Rating ★★★★½

The junior edition uses colorful visual clues, including illustrations, animation, and photographs, to introduce prereaders to the cultures of the world.

"It teaches you stuff like if Brazil was not around, there'd be no chocolate in the world," said one eight-year-old tester. "And I never knew that Sweden's favorite sports are hockey and skiing."

World Beat Visit the four corners of the earth in search of the V.I.L.E. henchmen.

As they chase the villain around the world, kids pick up pieces of a photograph of one of Carmen's henchmen. They then search the country for a clue to lead them to the next destination in the chase and another piece of the mug shot.

All the clues in the junior edition are read aloud, so even prereaders can be sleuths for the day. Beginners can get help every step of the way from Dee Jaye, the friendly "GizmoTapper."

Although the stated age range is five to eight, the game is engaging enough for older kids, too.

One ten-year-old gave the game a 10. "I like that it tells you the name of the country and one fact about it, and the pictures were cool because they showed you what things look like in different countries."

One problem with the game is that some kids found it hard to click on the country they wanted to travel to, because the hot spot was small and difficult to target.

As players become more adept, they graduate to harder levels, which means hours of exploration and fun.

Brøderbund, 800-521-6263; Mac and Windows CD-ROM, **$40** (estimated street price); ages 5 to 8.

Square Game Make all the rows and columns add up to nine.

Counting on Frank

Bring math to the real world

COUNTING ON FRANK, BASED ON the book by Australian author Rod Clement, takes math out of the classroom and lets kids ages eight to twelve figure out real-world problems — like how much change you'll get from $20 if you buy five cans of dog food at 75 cents a can.

Although kids love the games and graphics, some complained about the limited number of places to explore and how characters repeat what they say each time they are visited. This suggests that the game may not keep them enthralled after repeated sessions.

Go Figure Get the right answer and send Frank and Henry to Hawaii.

The main goal of the game is to win the jelly-bean counting contest being held in the general store. The stakes are high — the winner gets a trip to Hawaii, and Henry and his cool dog Frank are determined to hit the beach.

FamilyPC Rating ★★★½

To figure out how many jelly beans are in the jar, kids have to explore Henry's house and neighborhood to solve at least eight math problems. Each correct answer brings them one clue to the jelly-bean count.

The game has three levels of difficulty. On the first level, the problem reads, "How much will I earn if Dad pays me 50 cents per bag and I rake two bags of leaves?"

At the third level, it gets more complicated: "How much will I earn if Dad pays me 75 cents for the first five bags and $1.50 for each bag after that and I rake seven bags?"

Kids use Henry's calculator to figure out the problems, some of which require using nested parentheses to solve.

Aside from the bean contest, Counting on Frank includes four math games that touch on geometry, logic, and multiplication and division.

EA*Kids, 800-245-4525; Mac and Windows CD-ROM, **$34.95**; ages 8 to12.

AlphaBonk Farm

Bizarre barnyard adventure

WITH A MIXTURE OF PHOTOGRAPHS, animation, music, and illustrations, AlphaBonk Farm engages kids ages four and up with a funny and slightly irreverent romp through a wacky farmyard, where a svelte pig talks, a colorful parrot recites rhymes, and a pudgy frog plays games. Kids hear poems, learn farm lore, and x-ray cows, pigs, and goats. They also learn the alphabet and hone their decision-making and problem-solving skills.

Animal Crack-ups Kids can create crazy hybrids at the Zip Zap Zany Farm.

AlphaBonk Farm has a different look and feel from other computer games. First of all, it's funny. The endearing characters keep both adults and kids laughing. Also, instead of clicking on objects to see a simple animation, kids move, change, and cause interactions among more than 300 objects. In Zip Zap Zany Farm, for example, kids are presented with animals and objects that begin with the letter *Z*. Well, sort of. There's "zee chicken" and "zee cow," along with a zipper and a zapper. Kids can drag the animals together to create new creatures — a dog with a frog's head or a cow with a chicken's tail and beak. Because they can bounce back and forth between all parts of the program, kids will stick to it for hours and come back for more the next day.

FamilyPC Rating ★★★★

Although the rhythm of the program is pretty fast and the poems use big words, kids didn't have a hard time following it, because the words get splashed on the screen. Younger kids may not take in every word, but they'll have fun watching, listening, and playing games.

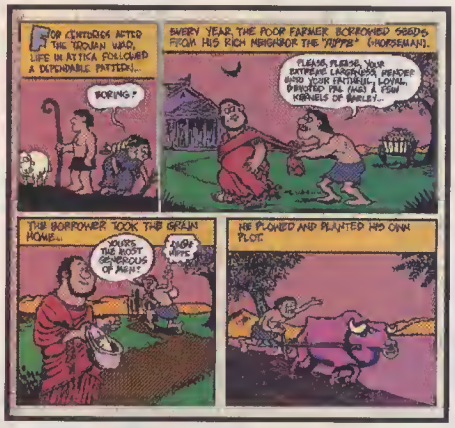
Headbone Interactive, 800-267-4709; Mac and Windows CD-ROM, **$34.95** (street); ages 4 to 10.

Cartoon History of the Universe

A sketch in time

THE PROSPECT OF SITTING DOWN to study 13 billion years of history may seem daunting. But if it's presented to the tune of a lively animated comic strip and involves crawling through pyramids and rebuilding the Acropolis, it's a walk in the park.

From the Big Bang theory to the civilizations of ancient Greece, The Cartoon History of the Universe uses over 2,000 animations and five hours of audio to cover ancient history in a colorful and fun burst of energy.



Panels of Experts Take a colorful romp through human history.

Starting in the wacky history professor's library, kids can launch any number of journeys, ranging from the Great Pyramids of Egypt to a romp through the Maze of the Minotaur. Each trip features games that require brains and brawn to conquer. When kids arrive at the Propylaia, they must save the Lydian princes from the pyre by solving a puzzle, and to get deeper into the pyramids, kids must match the gods with their hieroglyphic pictures.

FamilyPC Rating ★★★★

The professor's library holds seven volumes of historical comic strips on two CD-ROMs. The animated histories are lighthearted but accurate, throwing in fun facts along the way to keep things lively. Early Aegean people had modern plumbing, for example, and Spartan women took part in the military, owned property, and ran Sparta while the men were at war.

Putnam New Media, 800-788-6262; Mac and Windows CD-ROM, **$40**, ages 10 to adult.

The Essential Frankenstein

Monster-size reference

THIS CD-ROM IS AN ACADEMIC treatment of a story that has grown to mythic proportions with Hollywood's help. It includes the full text of the first edition of Mary Shelley's novel, historical annotations, biographical information, and commentary.

Though reading a novel on-screen will never have the appeal of curling up with a book, this disc is meant to complement rather than replace the book. It includes video, movie posters and stills, audio, a filmography, and a bibliography. The result is a must-have for enthusiasts and a great starting point for anyone interested in studying Shelley's classic work.

FamilyPC Rating ★★★½

Byron Preiss Multimedia, 800-482-3766; Windows CD-ROM, **$39.95**.

Frank Talk Everything you ever wanted to know about Shelley's creature.

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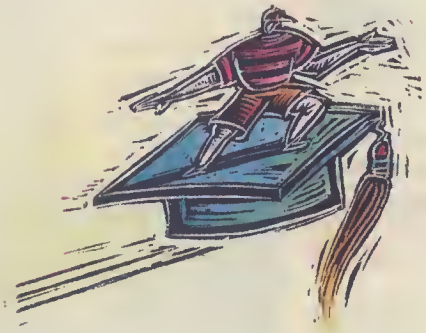
Multimedia kits from Creative Labs include all you need to turn a PC into an outrageous educational system—speakers, a CD-ROM, a Sound Blaster™ sound card, and lots of the hottest software. Your rug rats could become rocket scientists overnight. In Sound Blaster Digital Schoolhouse,™ you get the most popular educational software. Like *Kid Works 2*, *Stradiwackius*, and *The Cruncher*. Suddenly, math and reading are cooler than Beavis and Butt-head.



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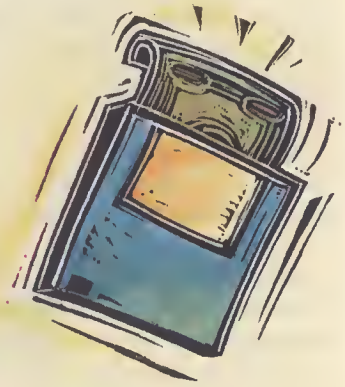

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Of course, all Sound Blaster multimedia kits provide 100% Sound Blaster compatibility, tech

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Visio Home

Make drawing a family affair

NOT EVERYONE WHO BUYS A drawing program wants to be Michelangelo. Many people have rather humble, yet very specific, projects in mind — such as drawing a road map so that friends can get to your home, making a chart for a science report, or creating flash cards to study for a geography test. Such is the thinking behind Visio Home, an affordable new version of the classic drag-and-drop drawing program aimed at families.

FamilyPC Rating ★★★★

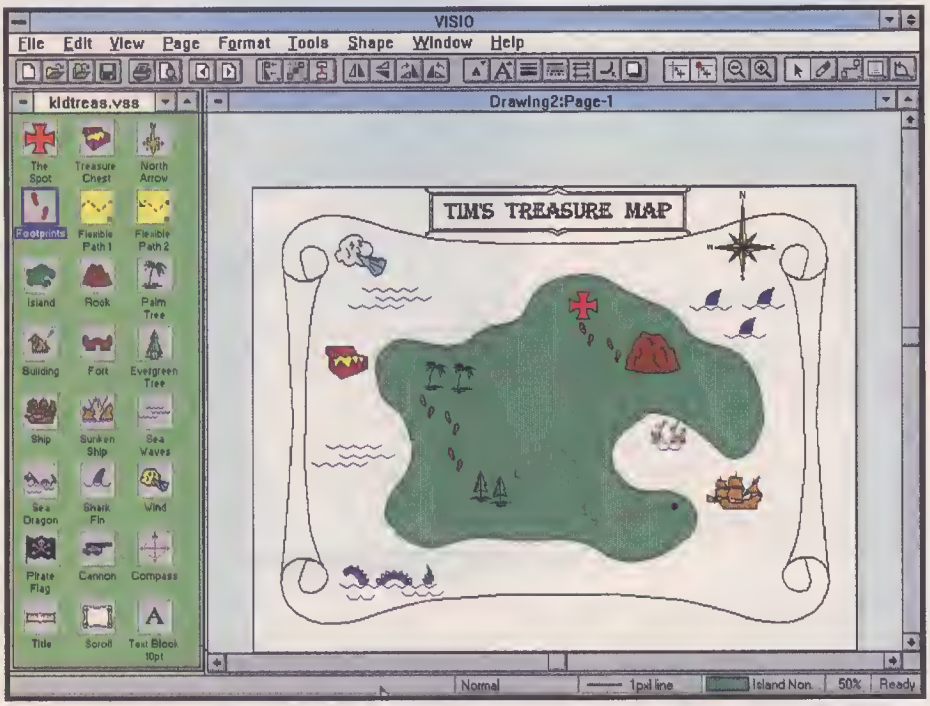
Visio Home makes extensive use of templates and predrawn objects that you drag onto a drawing area. In many cases, creating a Visio Home drawing is no more difficult than assembling the pieces of an Erector Set. The program comes with thirty-three stencils and a total of 1,000 SmartShapes — clip art that either is related by a theme or can perform a trick or two. For example, you can make flash cards that reveal either one or two answers when clicked on (sample flash cards for learning German, kanji, and math are included). Other templates let you make road maps, draw floor plans, create football playbooks, plot family trees, place dinosaurs into a scene, and much more. You can add color and text to any object.

With Visio Home's handful of drawing tools, you can also create your own artwork, but this isn't the program's strength. If you need to draw free-form objects, a program such as FutureWave's SmartSketch (see our January/February issue, page 218) is a much better bet. Importing artwork via the Clipboard or as .PCX or .EPS files is another way to bring original artwork into the program.

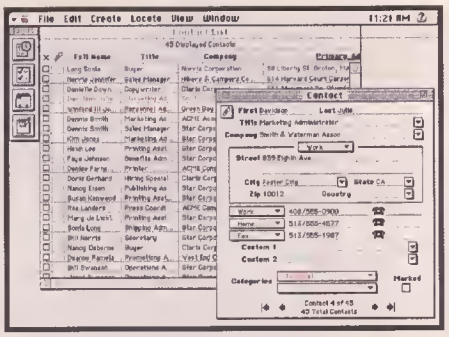
Visio Home has an attractive, easy-to-navigate interface. Tools and commands are accessible from pop-up menus at the bottom of the screen via a tool bar. Help is available through two manuals and from within the program.

Visio Home takes the headache out of creating many kinds of useful home drawings. If you have school-age kids, it's a great value.

Shapeware Corp., 800-457-3335; Windows disk, **$49.**



Make Me a Map Kids and adults can easily create great drawings in Visio Home.



Executive Order Claris Organizer integrates appointments and addresses.

Claris Organizer

An integrated electronic organizer

IF YOU USE A MACINTOSH AND want an electronic way to get a handle on your appointments, contacts, and other details of daily life, Claris Organizer may be just what you're looking for.

Claris Organizer is a PIM (personal information manager) with four components — Agenda, Tasks, Notes, and Contacts. Each of these components can be accessed by clicking on a button on a floating palette, so everything is within easy reach.

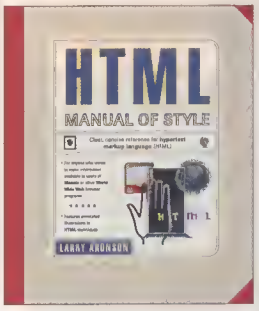
Claris Organizer has several "smart features" that make it simple to use. For example, you can create a note by dragging a contact name, an appointment, or a task onto the Notes icon in the floating palette. Not only is the note created, but you can quickly move between the contact, appointment, or task and the note through a drop-down menu. For example, you could create a note reminding yourself that next Friday is Mom and Dad's night out and link it to a baby-sitter's number and the numbers of your favorite restaurants.

FamilyPC Rating ★★★½

Claris Organizer's impressive array of printing options lets you output data in such formats as calendars, labels, envelopes, notes, address books, fax cover sheets, and more.

While Claris Organizer isn't specifically designed for home use, it can quickly become a productive member of the family. For a home-based business, it's a natural.

Claris Corp., 800-325-2747; Macintosh disk, **$99.**



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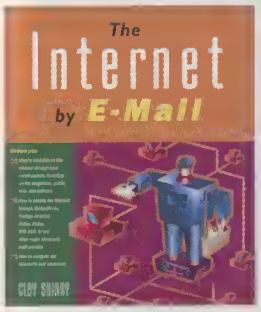

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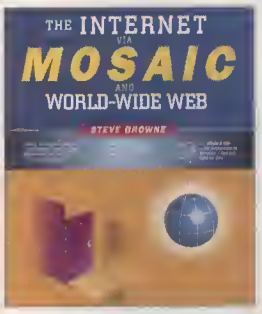

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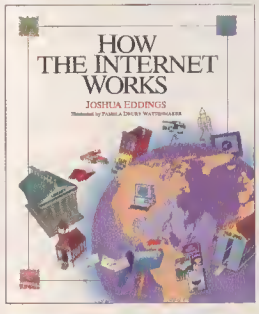

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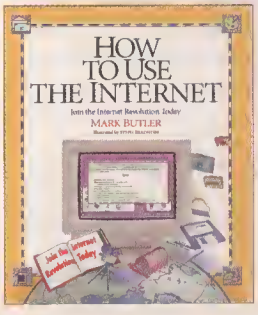

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KidMail Connection

An e-mail pen-pal program for the younger set

THE IDEA OF REACHING OUT TO friends, extended family, and even people you don't know all over the world using electronic mail is intriguing to most of us. Suddenly, time zones no longer matter, and the expense is far less than the cost of a phone call. And what's really neat about it is that the kids are far more likely to "talk" to Grandma and Grandpa down in Florida by e-mail than they ever would by telephone.

FamilyPC Rating ★★★½

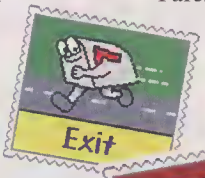
So if you have youngsters eager to test the e-mail waters, ConnectSoft's KidMail Connection is worth a look. To use this product, you need a subscription to an online service. KidMail directly supports Prodigy, CompuServe, and MCI Mail, and it indirectly supports America Online and the Internet. KidMail is the children's version of ConnectSoft's well-done E-Mail Connection software for adults.

KidMail is fun and relatively easy for kids to use. It provides three themed mail centers (Prehistoric, Space Age, and Secret Agent), each of which offers tools for receiving, sending, creating, and answering mail.

Quick Messages provides boilerplate text for various message types, such as Happy Birthday and Thank You. The Address Book comes loaded with e-mail addresses for Santa and the president.

Many people will find the program difficult to set up, however. Also, there are some quirks. For example, there is no easy way to reply to messages. You'll have to re-address a response no matter what.

On the plus side, KidMail automatically captures addresses from all the messages you receive, so kids won't have to fuss with e-mail strings very much. Best of all, kids need KidMail Stamps in order to send messages. Parents can allocate groups of ten stamps, so kids won't have to constantly ask whether it's OK to send a message, but they won't run up a $100 bill while no one's looking, either.



ConnectSoft, 800-234-9497; Windows disk, **$34.95**, CD-ROM, **$29.95**, ages 7 to 12.

Special Delivery KidMail Connection opens up the world of e-mail to your family.

Dream Weaver Act out your rock-'n'-roll fantasies with the Virtual Guitar.

Virtual Rock 'n' Roll

Air guitar of the '90s

EVER DREAMED OF JAMMING ONstage with Aerosmith? Now you can, sort of. Ahead, Inc., has found a way to move beyond air guitar to Virtual Guitar.

The Virtual Guitar is a mock guitar, complete with strings and a pick, that plugs into your serial port. You don't need to know any fingerings — just strum the strings at the right beats and you're part of the on-screen band. All it takes is a little rhythm, or at least good hand-eye coordination.

FamilyPC Rating ★★★½

You can fill the rhythm, lead, or stunt guitar tracks on the song you choose. (The disc contains six songs, including "Kickstart My Heart" by Mötley Crüe and "Hey Jealousy" by the Gin Blossoms). If you hit a note right on, it sounds jammin', but if you miss, you'll notice — and so will your audience.

When you get good enough, you'll play to a tough crowd at the Dead Inn. You'll have to practice hard not to humiliate yourself.

Once you've mastered the songs on this CD, you may ask yourself, what next? Ahead plans to release new titles, including Quest for Fame, which features a climactic onstage gig with Aerosmith.

Virtual Music by Ahead, Inc. (to be used with the Virtual Guitar), 800-872-7827; Windows CD-ROM, **$99.95.** Quest for Fame featuring Aerosmith, **$79.95.** More titles will be available for **$24.95.**

Also available for the MAC for $149

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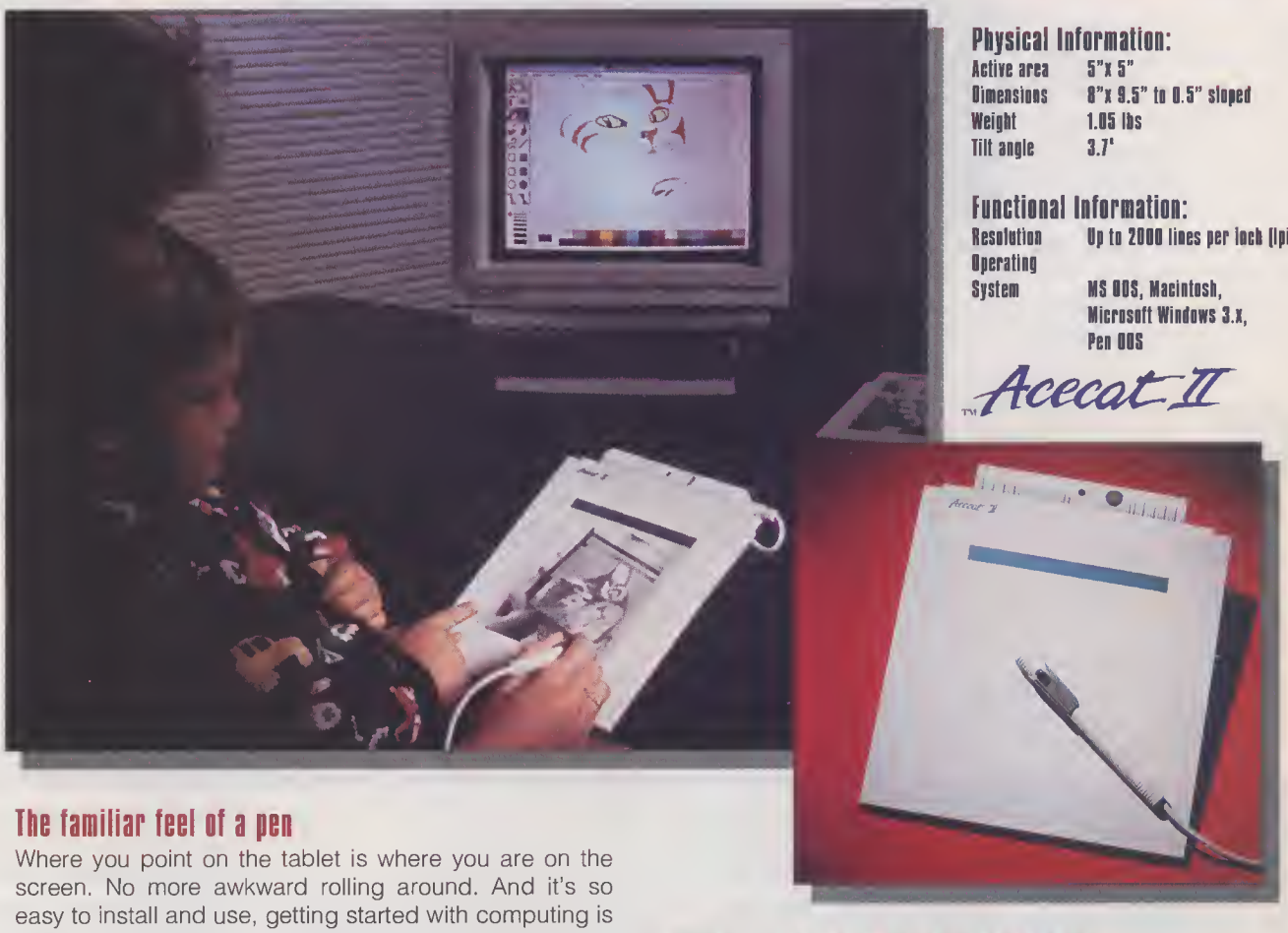

Physical Information:

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Dimensions	8"x 9.5" to 0.5" sloped
Weight	1.05 lbs
Tilt angle	3.7°

Functional Information:

Resolution	Up to 2000 lines per inch (lpi)
Operating System	MS DOS, Macintosh, Microsoft Windows 3.x, Pen DOS

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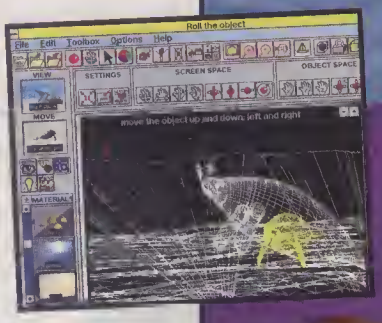
Simply 3D

Designed for the whole family

REALISTIC 3-D COMPUTER ANIMATIONS once took roomfuls of mainframe computers to create. That has changed — both hardware and software have improved — but until lately, if you wanted to create 3-D art and animation, you still had to invest $500 or more for software, and many hours to master a complex set of features and commands. Now, for a reasonable price, you can explore 3-D art using a new program designed for family use.

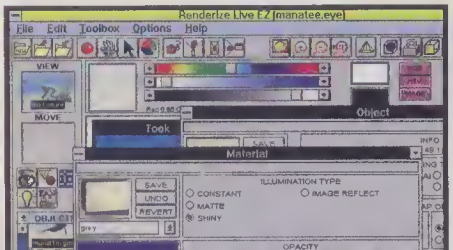


Simply 3D produces photo-realistic scenes and simple animations on your desktop PC. It comes on CD-ROM, with a collection of 3-D objects to populate your scenes, and textures and materials from which to build those objects.

Render Splendor This picture is a mixture of objects that ship with the program (manatees) and imported graphics (fish).

Model Program

To prepare for Simply 3D, think of yourself as a photographer. You select the objects that will appear in a scene, position them, light them, and place a camera. When everything's the way you want it, you render the scene — the equivalent of snapping a photograph, except the result is an image file.



Oodles of Options Simply 3D's interface can easily become cluttered.

Creating, or modeling, new 3-D objects is usually the most difficult part of creating 3-D artwork. Simply 3D sidesteps the issue entirely; it has no modeling capabilities. You're limited to the 3-D objects included on the CD-ROM. You can import 2-D graphics from CorelDraw and Adobe Illustrator, as well as TrueType fonts, and transform (extrude) them into pseudo-3-D objects that are flat on the surface but have depth.

The Simply 3D package boasts 100 3-D objects — in fact, I counted 135. But sixty-five of those are maps (Kansas, Portugal, etc.), and the others aren't organized very well.

Friendly File

Simply 3D's best feature is its friendly graphical interface. You access most functions — such as moving objects, rendering pictures, and selecting colors — through colorful icons, easier for children to recognize and manipulate than drop-down menus. You add objects, lights, and so forth to your scene by dragging and dropping them.

To animate a fly-through of your scene, you specify the camera's position in the first and last frames — the "key" frames. The program figures all the in-between frames for you and automatically generates the animation. You can save your animation file as a movie that you can add to another type of document or play independently.

Still, this is not a program that your first-grader is going to be able to pick up in an hour. The 3-D process is just too complicated for that. You must worry about setting up scenes, providing lights, and positioning the camera — about rendering resolution and texture quality.

However, with a little coaching, your computer-hip kindergartner can drop in a dinosaur and a flowered background and make a picture that pleases both her and you. My six-and-a-half-year-old can drive it with a minimum of assistance. Your fifth- or sixth-grader may be able to fly solo.

Simply 3D asks a lot from your computer: at least 8 megabytes of RAM, 5MB of hard drive space, and a 25MB permanent Windows swap file. Simply 3D is also finicky about how your computer's memory is set up and what other programs it shares that memory with. But it rewards you with ease of use and excellent rendering performance, especially for a Windows program.

FamilyPC Rating ★★★★

If Simply 3D whets your appetite for more, you can upgrade to its big brother, Visual Reality, which includes a modeler, an image editor, and a fuller feature list, for $349.

Visual Software, 800-669-7318; Windows CD-ROM, **$59**.

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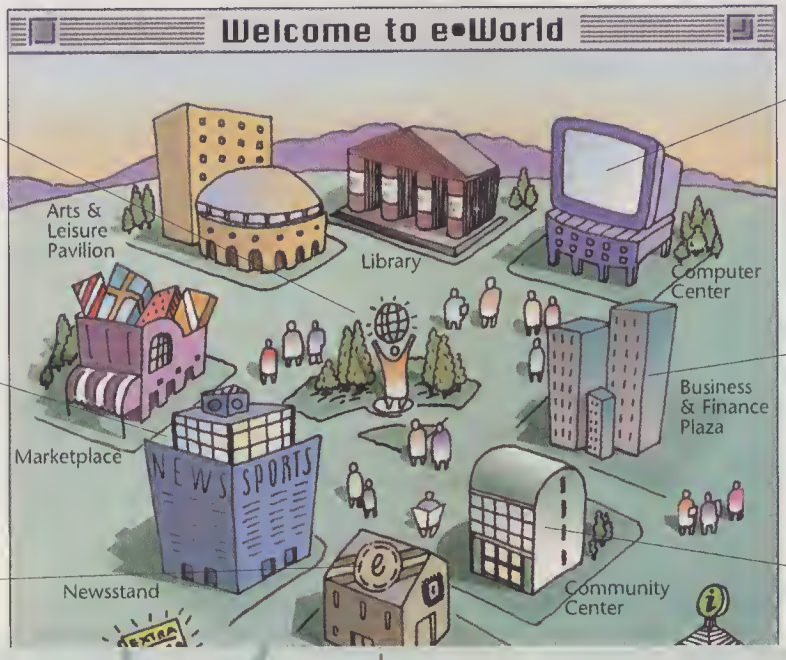

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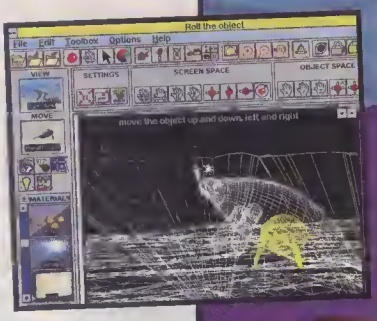

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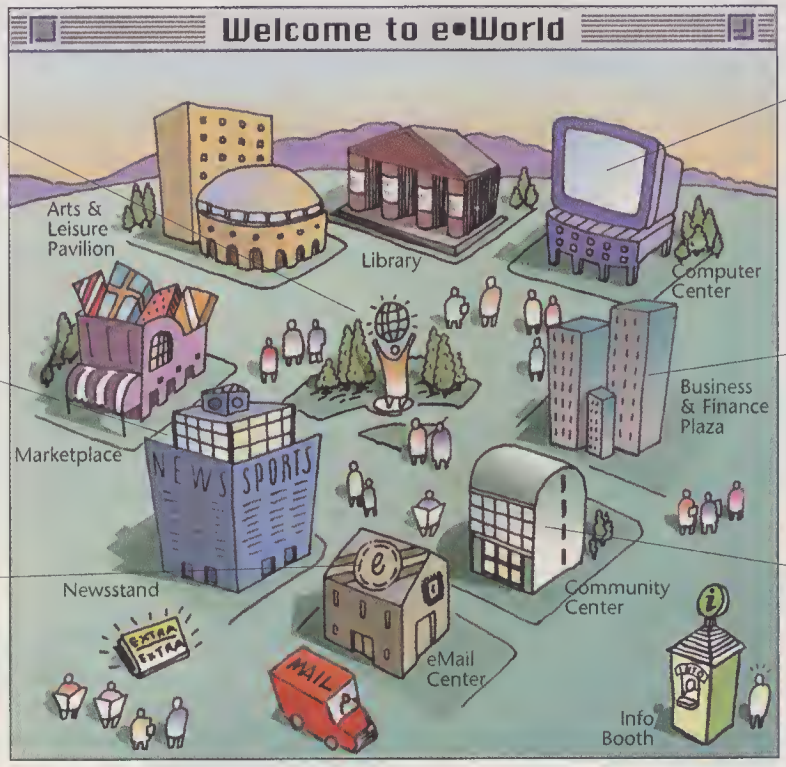

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CD-ROM Movie Guides

Three multimedia reference discs

MULTIMEDIA MOVIE AND VIDEO guides, which in addition to exhaustive listings include pictures, sound, and reviews, are ideally suited for the family computer. Before running out to the video store and agonizing over which movie the whole family will enjoy, you can watch a scene or two,

read up on all the cast members, check out other movies the director has done, and listen to the musical score.

We looked at the three most up-to-date guides — all were updated last November — to see which was best suited to family use.

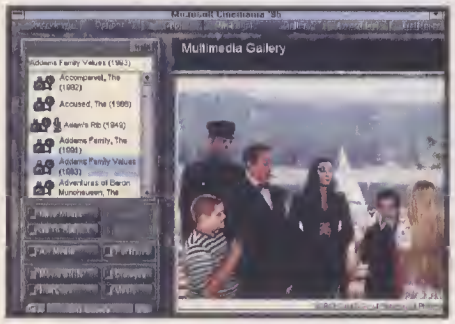
Microsoft Cinemania '95

THERE ARE DIRECTORIES AND THERE ARE encyclopedias, and then there is Cinemania '95, a broad-based reference guide to nearly

FamilyPC Rating ★★★★

20,000 movies for just about every taste, including foreign films and documentaries. Most listings are text-based, but many contain video, audio, movie stills, reviews, and detailed plot synopses.

You'll find 4,000 biographies (half of them with photographs) of movie greats,



Family Value Cinemania's multimedia gallery is packed with movie photos, dialogue, and clips.

including actors, directors, even screenwriters and camera operators. There are also exhaustive award lists, complete chronological filmographies, remarkable cross-referencing, historical notes, and select reviews from Leonard Maltin, Roger Ebert, and Pauline Kael, providing the user with a variety of informed opinions. It also includes a glossary of film terms, just in case you need to know what a "grip," "best boy," or "gaffer" does.

You can also see film clips and read dialogue excerpts from films ranging from Alfred Hitchcock's *The 39 Steps* to *Mary Poppins* and *E.T.*

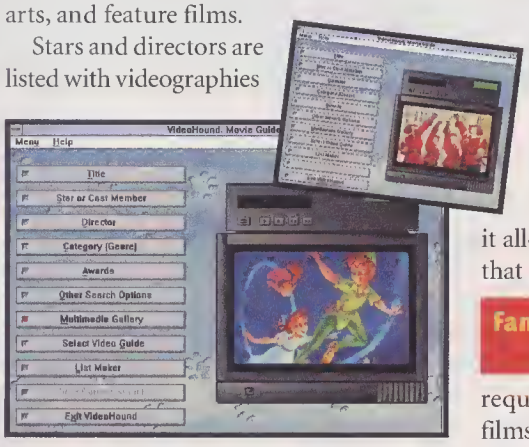
Another helpful feature is a roulette wheel that picks a movie for you. Select the type of movie you're in the mood for and spin the wheel to get a list of recommended titles, which you can print and take to the video store. It certainly beats tossing a coin.

Microsoft, 800-426-9400; Mac and Windows CD-ROM, **$59.95.**

VideoHound Multimedia

VIDEOHOUND DISTINGUISHES ITSELF FROM the other guides by specializing in all things on videotape. It has a list of nearly 60,000 films of all types, including kids' videos, how-to films, documentaries, sports, fine arts, and feature films.

Stars and directors are listed with videographies



Video Vault Check here before heading to the video store.

and, in many cases, photographs. You'll also find 2,000 biographies of actors and directors.

Searching for just the right video is a breeze. You can enter one or more criteria,

FamilyPC Rating ★★★★

including actor, director, VideoHound rating (from four bones to "Woofers"), MPAA rating, year (or range of years), awards, or category (including Teen Angst, Family Ties, and Film Noir), and get a listing of the films on tape.

That's Entertainment Look up your favorite movies and stars.

If you want to see your favorite actor in action, enter his name and scroll through video clips that feature his performances. The disc also includes 600 audio clips of directors and actors discussing their films, 20,000 pieces of box art, 2,000 movie stills, and price and distributor listings.

Once you've come up with a list of videos to check out, print it out and take it along. You can also use the listmaker to catalog your own video library.

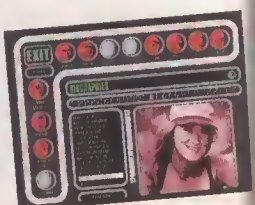
Visible Ink Software, 800-735-4686; Windows CD-ROM, **$59.95** (street).

InfoBusiness Mega Movie Guide

THE MEGA MOVIE GUIDE IS EASY TO use right out of the box. The interface screen is uncomplicated and self-explanatory, and the program handles cross-referencing well. Like the other guides, it allows you to look up movies that have multiple actors or directors. (For instance, you can request a search for all of the films Bob Hope and Bing Crosby did together.)

FamilyPC Rating ★★★

The biographies are disappointing. They have listings of the kids who played in the new *Little Rascals* but omit bigger stars such as Myrna Loy, John Huston, and Oliver Stone. The video clips are trailers for the most part, and they aren't very edifying. FPC



InfoBusiness, 800-657-5300; Windows CD-ROM, **$49.95.**

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The 1995 Chevrolet Lumina Minivan.

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Available Remote Power Door

And to protect you from dings from manic meteorites and grocery carts, Lumina also gives you composite outer-body panels. As for advanced technology, its available traction control system is so intelligent, it monitors your wheels and automatically reacts to give you improved traction on changing road surfaces. Lumina. It looks different because it is different. So come take a look at one. It's amazing how one sighting can transform you into a believer.

Available Traction Control

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LO-300/870/1170	$196/$427/$597
LO-2550 Clr.	$899
DFX-5000+/8000	$1317/$2217
Stylus 300	$184
Stylus 800+/1000	$207/$427
Stylus Color	$499

PANASONIC PRINTERS

KX-P4400/P5400	$349*/$499
KX-P4410/P4430	$469/$659
KX-P4440	$989
KX-SP100 Printer/Fax/Copier	$799
KX-P1150/P2023	$129/$175
KX-P3123/P3124	$249/ $319
KX-P2130/P2135	$169*/$195*
KX-P1824/P3624	$369/$399

*Price includes Manufactuiar Rabate

OICITAL

DECWRITER 85/100I	$159/$199**
DECColorwriter	$349
DEClaser 1152/5100	$699/$1149

** Includes $50 Mail-In Rabate thru 3/31/95

LEXMARK

4029 LaserPrinter 6	*949
4039 LaserPrinter 10 plus	*1219
Optra R/Rx	*1427/*1999
Optra L/Lx/Lxl	*1899/*2469/*2999
WinWriter Saries	
Model 100/200	*285/*455
Modal 400/600	*757/*997
ValueWriter 300/600	*645/*814
ExecJet IIc	*325
2380/2381 Plus Dot Matrix	*309/*439
2390/2391 Plus Dot Matrix	*329/*439
4228 Dot Matrix	*1299
IBM Color Jet Pnnter PS 4079	*2499

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ML320-I/ML321-I	$299/$429
ML590-I/ML591-I	$424/$584

NP PRINTERS

HP DeskJet 320/540	$298/$284
HP DeskJat 540 Opt. Color kit	$39.95
HP DaskJat 560C	$469
HP DeskJet 1200C/C PS	$997/$1587
HP Support Pack	CALL
HP LaserJet 4L/4P	$649/$949
HP OfficaJet Printar/Fax/Copier	$769

CANON

BJ-100 /BJ-10SX	$197/$237
BJ-200e/BJ-230	$224/$384
BJC-4000/BJC-600a	$394/$458
LBP-430/ LBP-1260	$577/$1269

TEXAS INSTRUMENTS

microLaser 600	$859
microLaser Pro 600 PS23	$1167
microLaser Pro E/ Power Pro	$1347/$1597
microWriter Printer	$464
microWriter PS23/PS85	$539/$799

BROTNER

HL-630/HL-645	$389/$499
HL-655M/HL-660	$599/$679
HL-1280	$1199

Modems/PCMCIA

HAYES

PCMCIA OPTIMA 14.4+FAX14.4	$189
ACCURA 144+FAX144 internal	$92
ACCURA 144+FAX144 external	$112
ACCURA 288V.FC+FAX internal	$189
ACCURA 288V.FC+FAX external	$229
OPTIMA 144+FAX144 internel	$369
OPTIMA 144+FAX144 extarnal	$369
OPTIMA 288 V.FC+FAX internal	$379
OPTIMA 288 V.FC+FAX external	$439

US ROBOTICS

Sportster 14.4 Fax internal	$99
Sportster 14.4 Fax external	$115
Sportstar 14.4 PCMCIA	$179
Sportster V.34 internal	$219
Sportster V.34 external	$239
Sportster V.34 PCMCIA	$349
Courier Dual Standard 14.4 PCMCIA	$349
Courier V.34 internal	$379
Courier V.34 extarnal	$419
Courier Dual Std 28.8 PCMCIA	$399

MEGANERTZ

PCMCIA 28.8/14.4	$419
PCMCIA X-JACK 14.4/14.4	$199
PCMCIA 14.4/14.4	$219
PCMCIA Gold Series X-JACK 14.4/14.4	$239
PCMCIA Gold Series 14.4/14.4	$239

ASPEN

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V.34 28,800 Data Fax Modam int/ext	$169/$189

BOCA

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14.4 Pocket w/FAX	$169
14.4/14.4 Multimedia	$119
V.34 28,800 bps Modem int./ext.	$185/$225

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Ethernat LAN 10Base2-10Basa-T Combo	$159
New Media 14.4 Data/Fex Modem	$145
Wave Jammer 16-bit Stereo Sound	$234
Bus Toaster SCSI-2 Adaptar Card	$209
PCMCIA 16-bit Stareo & SCSI II	$359

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FLEX CD-PRO Classic	$249
FLEX CD-Pro External	$219

NEC

MultiSpin 2Vi	$169
MultiSpin 2V Daluxa	$284
MultiSpin 3Xp	$379
MultiSpin 3Xi Plus Kit	$449
MultiSpin 4Xi	$379
MultiSpin 4Xe	$479
MultiSpin 4Xi kit	$449
MultiSpin 4Xa kit	$549

CHINON

CDS-535	$209
CDS-535PC int/ext	$289/$349

TOSNIBA

XM3501 Int Oued Spead	$369

MICROSOLUTIONS

Beck Pack Porteble	$339

SONY

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i/F Kit	$29

MEDIAVISION

Reno Portable	$299

TEAC

CD-55A (Ouad Spaed)	$299

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OmniCD 3X SCSI	$399
Discovery CD 16	$249
Edutainment CD 16 Int/ext	$449/$549
GameBlaster CD 16	$379
Digital Schoolhouse	$299
Sound Blaster 16 Value Edition	$99
Sound Blaster Valua Edtion	$49
Sound Blaster Pro Valua Edition	$69
Sound Blaster 16 SCSI-2	$179
Sound Blaster 16 SCSI-2 w/ASP	$199
Sound Blaster 16 MultiCD	$149
Sound Blaster 16 MultiCD w/ASP	$179
Sound Blaster AWE32	$299
Sound Blaster AWE32 Lita	$229
Wave Blaster	$175
Voice Assist	$55

ORCHIO

Videola	$359
SoundWave 32	$179
GamaWave 32	$129

MEDIAVISION

Pramium 3-D (SCSI/MCD)	$145
Wavatabla Upgrada Card	$145
Pro 3-D	$265
Super Deluxe Kit (MV 3000)	$369
Premium Deluxe Portable Kit (MV 4000)	$499
Pro Deluxe Kit (MV 5000)	$699

ADS

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TV Elite int w/COMPEL	$139
TV Elite A/V	$179
Audio Rock-it	$59
PC Primetime	$325
Video Clipper	$315

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Monte Carlo Game Cerd Synthesizer	$89
Tropez	$199
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AI TECN

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Wavewatcher TV	$329
Wireless Bandit Game Control	$49

ALTEC LANSINC

ACS50	$75

JENSEN/POWER PARTNERS

JPS35	$65
JPS45	$119
AR22	$99
AR42	$155
AR570	$279

PANASONIC

EAB401P	$49
EAB710P	$139

SONY

SRS-50PC	$89
CSS-B100	$99
SRS-D2KPC	$165

Scanners

RELISYS

Reli 2412	$799
Reli 4816	$999
Reli 9612	$1499
Reli HandScan 8	$99
Reli Handheld MorphingScan	$199
Rali HandScan 24 w/CoralDraw 4	$299
AVEC Colour 2400	$499
AVEC HomaScan Scanner/Fax	$399

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ScanJet 3P Mono	$489

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CANON

IX-4015 Color	$689
IX-3010 Grayscala	$389

UMAX

Vista-S6	$779
UC630/UC1260	$599/$1139
MiniLook Color Handheld	$249

EPSON

ES1200 ProPC	$1229
ES1200 ProMAC	$1239
ES800 ActionScanner PC	$499
ES600 ActionScanner MAC	$549

MOUSE SYSTEMS

PageBrush/256 Mono Handheld	$99
PageBrush/258 Color Handheld	$189

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- Sound Blaster compatible Sound Card, 16bit CD quality
- Amplified Stereo Speakers
- 10 CD Titles (2 CD Discs)
- 14" MultiScan Color Monitor, .28 dp, 1024x768*i*
- DOS 6.2, MS Windows for Workgroups 3.11
- PFS WindowWorks
- MiniTower Case w/5 Drive Bays

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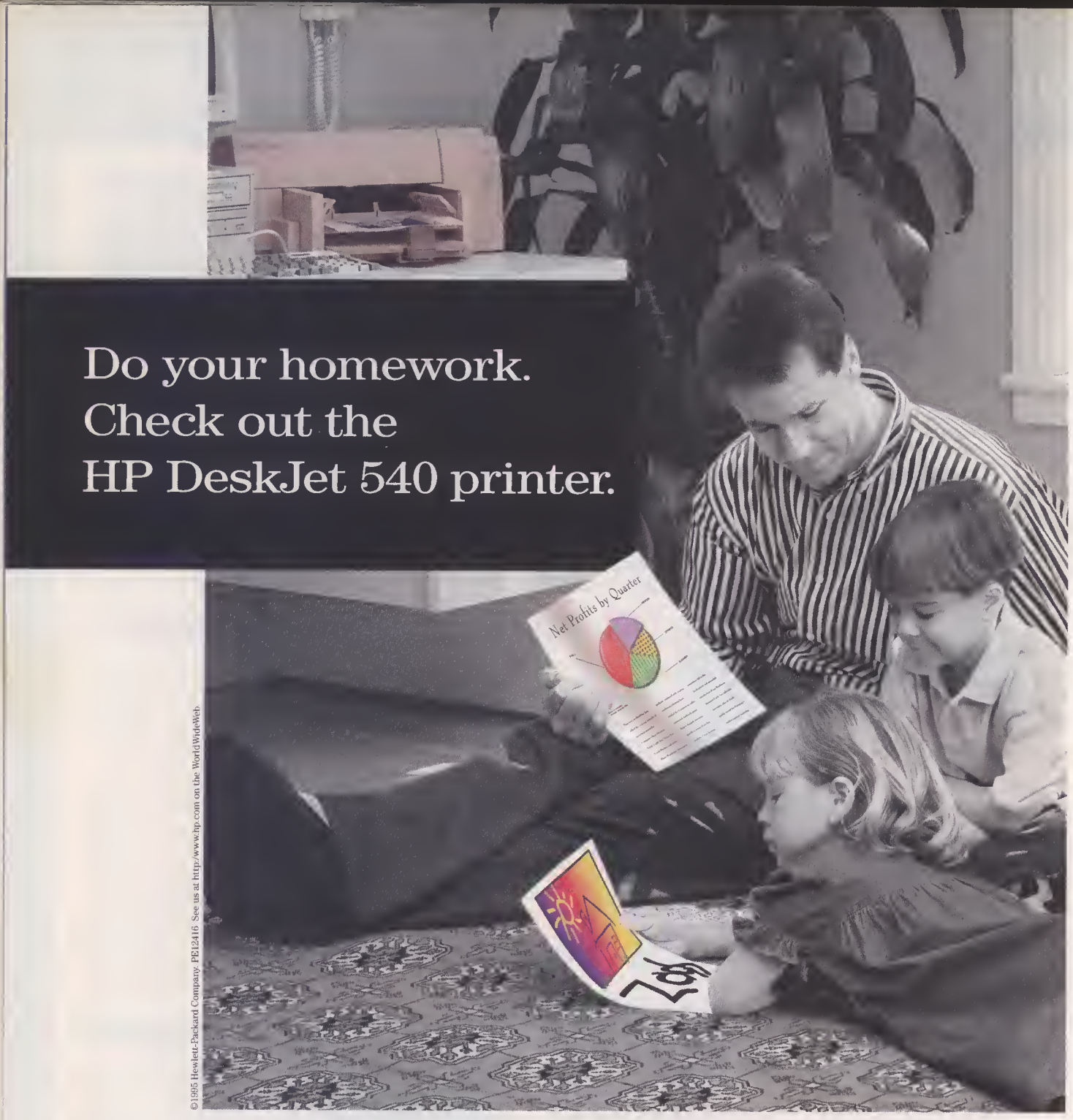

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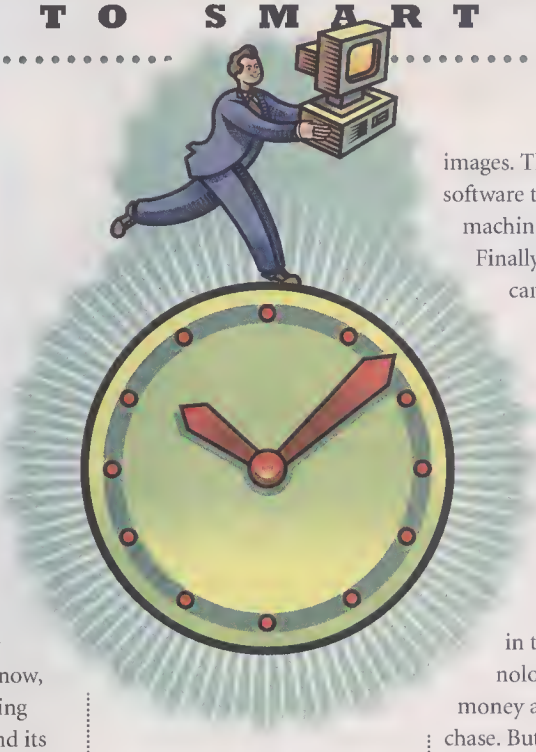
FAMILY SHOPPER

YOUR GUIDE TO SMART BUYS

When to Buy a PC

Buy the best technology you can afford



PROCRASTINATORS always have dozens of excuses for delaying decisions. When it comes to purchasing technology, the reason is almost always the same: if I wait, I can get the same thing for less.

It's an inarguable fact that PC prices drop over time, reducing the value of older technology. This is due, in part, to constant improvements in chip technology. According to Moore's Law, the number of transistors a chip maker can cram onto a chip doubles every eighteen months. Adding more transistors results in smarter, faster CPU chips and higher-capacity memory chips. Paradoxically, these better chips are also cheaper, because companies can make more of them at once.

Thus, in the PC industry, older technology is always being supplanted by newer, better, and not necessarily more expensive technology. While owning leading-edge technology might not be important for you right now, the disadvantage of waiting until equipment is beyond its prime is that it will become obsolete much quicker.

The technology cycle is the same for most computers:

The release of newer, faster computer systems is usually tied to the release of a better central processing unit (CPU) — for example, the move from 486 processors to Pentiums. When a new system is released, it can run most software applications faster than earlier models. Gradually developers take advantage of the new CPU and write applications that have more features, can handle larger files, or display better images. This new high-powered software tends to run poorly on machines with older CPUs. Finally, the older machines can no longer even run new software.

New computer systems consist of more than just a faster CPU. Most also contain better video display cards and monitors and faster drives.

Buying hardware in the middle of its technology cycle may save you money at the time of purchase. But since it also reduces the amount of time you'll be able to use your computer, you will be forced to upgrade sooner. Your best bet is to buy the best and newest technology when you need it and can afford it. This way you'll be confident that your investment will have the longest possible life span.

Increasing Power, Steady Price

Model	Processor	Price	Release Date	Notes
Prolinea 4/25s Model 120	486 SX/25	$1,349	9/92	4MB RAM, 120MB hard drive
Presario 633	486 SX/33	$1,298	8/93	4MB RAM, 200MB hard drive
Presario 924	486 DX/66	$1,649	9/94	8MB RAM, 525MB hard drive

*This chart, listing three consumer-oriented Compaq models, shows that while CPU power has more than doubled, hard drive capacity has more than tripled, and other components have improved, prices have remained relatively constant since 1992.

Buy, Rent, or Lease?

Weighing your options

Most of the time when you buy a computer, you pay cash or use a credit card. But there are two other options: leasing and renting. They each have their uses, but they're not for everyone. Unfortunately, few people know enough about these options to be able to decide if one suits their situation.

Leasing

With leasing, you get the equipment with no down payment (although you probably will have to pay a security deposit). You make monthly payments for the lease period, typically one, two, or three years. At the end of the lease period, you can relinquish the equipment, or you can buy it for fair market value (usually a minimum of ten percent of the original purchase price).

Leasing generally costs you more than financing using a credit card or personal loan. For example, a three-year lease for a $4,000 system will cost you $147 a month, and at the end of the period you'll have to pay around $400 to keep the computer. With a three-year bank loan at 15.25 percent, you'll make about the same monthly payment, but you'll have no payoff requirement at the end of the loan.

Leasing computer equipment has two advantages. First, people who use their computers for business might find a tax benefit in writing off the lease payments. Second, because leasing companies own the equipment being leased, they are more lenient than a bank about approving applicants.

Rentals

Renting is a relatively expensive way to acquire computer equipment, because of the short-term nature of rentals and because rental contracts usually include repair and technical support (leases typically do not).

Monthly rental rates average about ten percent to fifteen percent of the equipment's list price, so it's almost never cost-effective to rent for more than a very short time. But there are some good reasons to consider renting:

- You plan to hire part-time help for data entry work (for example, to enter two years' worth of checks into your new checkbook program or computerize your family address book), and you don't want to tie up your own computer.
- You're going on a trip and need a laptop for a week or two.
- You're a student or the parent of a student who finds that at term's end, the only available time on the school's computers is between three and four in the morning.
- Your computer will be in the repair shop for a week, and you can't afford to be without it.

Should You Leave a Deposit?

The rule of thumb for most purchases is, don't pay anything until you receive the merchandise. But smaller computer retailers and consultants must pay a restocking fee and return the equipment to the wholesaler if you change your mind, so it's not unusual for such firms to ask for a small deposit.

Deposits Buyer beware.

Unfortunately, some customers have paid substantial deposits on computers only to lose their money when the reseller went bankrupt. Here are two ways to protect yourself from losing your deposit.

Try to put the payment on a credit card. Most states have laws that keep you from being billed by credit card companies for items you haven't received.

If you have to pay cash, keep the amount low, and never more than fifteen percent of the equipment cost. If the company asks for more because it has to receive the merchandise COD, be wary. It might be a sign that the dealer has a poor credit rating.

FAMILY SHOPPER

COOL KEYBOARD SHORTCUTS

WINDOWS

Alt-Tab: Switch to another active application
Hold down Alt key and press Tab until the application you want appears. Then release the keys to switch to that program.

Alt-F4: Exit Windows/program
This exits virtually every Windows application, including Windows, if you're in the Program Manager.

Ctrl-C: Copy selection
Copies highlighted text or graphics into the Clipboard; some programs use the older Ctrl-Insert combo.

Ctrl-V: Paste Clipboard
Puts Clipboard contents at the current application's insertion point; some programs use the older Shift-Insert combination.

Esc: Shut dialog box
A peck on the Esc key makes an open dialog box vanish.

Ctrl-P: Print
Opens the Print window.

Ctrl-Esc: Show Task List
Use this at any time to display the Task List. From there you can switch to or shut down an application (e.g., to free memory to load a new document).

Ctrl-Alt-Delete: Exit unresponsive program
If an application stops working, this combo will sometimes get you back to the desktop.

F1: Open Help
Most programs open the Help file when you press this key.

see back ➤

FAMILY SHOPPER **SMART Card**

Your Guide to Buying Multimedia Systems

Minimum recommended specifications:
Speed: For DOS/Windows PCs, a 66-MHz 486DX2 CPU; for Macs, a 25-MHz Motorola 68040 CPU
Hard drive: For DOS/Windows PCs, 320MB; for Macs, 250MB
RAM: 8MB
CD-ROM drive: Double-speed
Modem: 14.4-kbps data/14.4-kbps fax
Sound card: For DOS/Windows PCs, a Sound Blaster 16 or compatible (Macs have built-in sound)
Monitor: 14-inch 256-color SuperVGA
Warranty: One year parts and labor
Price: $2,000 for a quality system

FAMILY SHOPPER **SMART Card**

Your Guide to Buying Black-and-White Ink-Jet Printers

Minimum recommended specifications:
Speed: Two (2) pages per minute
Resolution: 300 by 300 dots per inch
Price: $325 maximum for Macintosh, $300 maximum for PC
Also on the shopping list:
- Printer cable specific to your computer
- Paper
- Extra ink cartridge

FAMILY SHOPPER **SMART Card**

Know Your System – Buying Software That's Right for Your PC

Fill out the following information about your computer system and take this card with you when shopping for software.

DOS/Windows PC System
CPU ❑ 386SX or DX ❑ 486SX or DX ❑ 486DX2 ❑ DX4 ❑ Pentium
Clock speed ❑ 16 MHz ❑ 20 MHz ❑ 25 MHz ❑ 33 MHz ❑ 50 MHz ❑ 60 MHz ❑ 66 MHz ❑ 90 MHz ❑ 100 MHz
Operating system ❑ DOS pre-5.0 ❑ DOS post-5.0 ❑ Windows 3.0 ❑ Windows 3.1 ❑ OS/2 Warp

Apple Macintosh System
CPU ❑ 68020 ❑ 68030 ❑ 68040 ❑ PowerPC
Clock speed ❑ 16 MHz ❑ 25 MHz ❑ 33 MHz ❑ 60 MHz ❑ 80 MHz
Operating system ❑ pre–System 7.0 ❑ System 7.0 ❑ System 7.1 ❑ System 7.5

Other
Hard disk space available _____(MB)
Total RAM available _____(MB)
Sound card _____
Graphics card _____
CD-ROM drive ❑ single-speed ❑ double-speed ❑ quad-speed
❑ External speakers/headphones
❑ Microphone
❑ Joystick

FamilyPC's Top-Rated Multimedia PCs

System	Price	CPU	RAM	Hard Disk
Apple Macintosh Performa 638CD	$2300	66-MHz 68040	8MB	350MB
Gateway 2000 Family PC 4DX2-66	$1899	66-MHz 486DX2	8MB	730MB
AcerPower P90 Minitower	$2899	90-MHz Pentium	8MB	810MB
IBM Aptiva 530	$1899	66-MHz 486DX2	8MB	424MB
Packard Bell Pentium Multimedia System	$2500	60-MHz Pentium	8MB	420MB
Compaq Presario CDS 850	$1499	50-MHz 486DX2	8MB	340MB

FamilyTested Black-and-White Ink-Jet Printers in This Issue

Printer	Average Price	Print Speed	Cost per Page	Computer Type
Canon BJ-200e	$230	2 ppm	5.6¢	Windows
Hewlett-Packard DeskWriter 540	$320	< 2 ppm	3.2¢	Macintosh
Hewlett-Packard DeskJet 540	$294	< 2 ppm	3.2¢	Windows
Apple StyleWriter II	$297	2 ppm	5.4¢	Macintosh
Epson Stylus 800+	$243	> 2 ppm	2.5¢	Windows
Canon BJ-230	$443	< 2 ppm	5.6¢	Windows

FamilyPC Recommended Software
(FamilyTested score of 85 and up, or four stars or more)

Educational	Company	Price	Age	Reviewed in FPC
Putt-Putt Joins the Parade	Humongous Entertainment	$39.95	3–8	2/95
Arthur's Teacher Trouble	Brøderbund	$40	4–10	9/94
Math Rabbit	The Learning Company	$45	4–7	9/94
Math Workshop	Brøderbund	$40	6–12	11/94
Chadwick and the Sneaky Egg Thief	KnowWare	$49.95	3–8	11/94
Morgan's Trivia Machine	Morgan Interactive	$34.95	7–14	11/94
Creativity				
Creative Writer	Microsoft	$49	8–14	9/94
Storybook Weaver	MECC	$49.95	5–10	9/94
Kid Pix 2	Brøderbund	$40	4–12	11/94
SmartSketch for Windows	FutureWave Software	$99	8+	2/95
The Greatest Paper Airplanes	KittyHawk Software	$29.95	7+	2/95
Reference				
Dangerous Creatures	Microsoft	$59.95	7+	11/94
A.D.A.M.: The Inside Story	A.D.A.M. Software	$50	10+	11/94
Stowaway!	DK Multimedia	$59.95	10+	11/94
Microsoft Encarta Multimedia Encyclopedia	Microsoft	$99.95	9+	9/94
Rand McNally's TripMaker	Rand McNally New Media	$79.95	n/a	2/95
Productivity				
Dashboard for Windows	Borland	$49.95	n/a	11/94
ClarisWorks	Claris Corp.	$99–$299	n/a	2/95
Expresso	Berkeley Systems	$50	n/a	2/95

COOL KEYBOARD SHORTCUTS

MACINTOSH

Command-P: Print
Opens the Print window.

Command-S: Save
Saves the current document or file to disk from within any Macintosh program.

Command-C: Copy selection
Copies highlighted text, numbers, or graphics from any application into the Clipboard.

Command-V: Paste Clipboard contents
Puts Clipboard contents at the current application's insertion point. Use this after a Copy (Command-C) command.

Command-Period: Stop the process
Hit this combo to halt many ongoing procedures, such as opening a file or printing.

Command-Shift-1: Eject floppy disk
Use this combination to eject the floppy disk in the drive instead of dragging the icon to the Trash Can.

Command-Shift-3: Snap a picture
Want to print what's on the screen? Press this combo, which creates a file on the hard disk. Open the file with a paint or draw program; then print.

This is how Mommy and Daddy talk to our computer

I have my own line

New Software:
"Christmas in ComfyLand"
& "The Great Concert"
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Introducing Comfy -
the innovative educational way to introduce your preschooler to your computer

If your child is 2 to 6 years old and you own a PC, then you have the beginning of a unique educational experience. Now all you need is Comfy, the first integrated hardware/software package designed specifically for preschoolers.

Featured on **Good Morning America** and **The Today Show**, Comfy lets your child actually direct interactive, animated ComfyLand movies using a revolutionary keyboard - controlling the story sequence, influencing various story elements and even calling the characters! For 2 to 3 years olds, this is a colorful introduction to basic computer skills. For 4 to 6 years olds, Comfy is a fun, stimulating learning experience that can be enjoyed without parental supervision. And for you, Comfy is a serious educational system that improves your child's motor skills, enriches vocabulary and teaches basic social values, and lots more. There's even a special evaluation feature that describes your child's performance!

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The Best Results

Professional services are closer than you think

Are you interested in experimenting with digital photography, printing photographic-quality examples of your kids' computer creations, designing your own letterhead, or transferring computer animations to videotape or CD-ROM, but don't have the necessary equipment?

You're not alone. Few families own high-quality scanners, video output devices, CD-ROM recorders, color laser printers, or expensive dye-sublimation printers.

The solution is to take your work to a business that lets you use its equipment to perform these tasks on a per-piece basis. All cities and most small towns contain such businesses. In the corporate world, they are often referred to as service bureaus, though you probably won't find them in the yellow pages under that name. Instead, try *Desktop Publishing Services*, *Copying and Duplications Services*, *Computer Rentals*, or *Printers*.

Most desktop publishing services not only give you access to the latest technology, but also have the experts needed to run this equipment and to troubleshoot problems you might encounter.

If you don't have a desktop publishing shop in your area, don't despair. National companies are now set up to provide the same turnaround times as local companies. For example, Imagers, in Atlanta, Georgia, has its own electronic bulletin-board service. If you upload your file to it by 8:00 A.M. EST, the finished product will be delivered to you the next morning. If you're really in a rush, you can use the company's "crash service," which allows you to upload your job by 3:00 P.M. and still get next-day service.

Another potential advantage of national shops is that because they do such a large volume of business, they may provide better technical support and offer a larger variety of equipment.

One advantage of using a local business is that you can potentially save money and time on your work, since you are on-site and have the ability to experiment after you've seen samples of the output. Most shops rent computer time by the hour, charging between $6 and $20 dollars an hour, so it pays to do most of the work at home on your own equipment.

Most support the major professional page-layout, presentation, and photo design and production applications, such as Aldus PageMaker, Adobe Photoshop, and Microsoft PowerPoint. Before you take a file down to the shop, call to make sure it supports the program you're using. If the application you want to print from — Kid Pix, for example — is unavailable, you will have to save the file in a standard format, such as PICT (Mac) or BMP (Windows), and then import into one of the programs the service supports. Someone at the shop should be able to lead you through the necessary steps.

Go Local Many businesses let you use professional equipment to scan and print your files.

Average Prices for DTP Services

Service	Description	Price
Color laser print	High-quality color print	$5 to $10
Dye-sublimation print	Photographic-quality color print	$5 to $10
Poster print	Large-format color prints	$27 and up (depending on size)
Kodak Photo CD	35mm color transparencies or black-and-white negatives placed on Kodak Photo CD	$1 per scan
Kodak Portfolio CD	Multimedia files, such as animation, sound, illustrations, and photos transferred to CD-ROM	Prices vary (depending on type of file)
Scan	Scanning 35mm color slides, prints, or artwork	$15 and up (depending on size)
Slide	Creating a 35mm color slide	$5

buying a FAMILY computer shouldn't send YOU home empty-handed

You're finally ready to get a *computer*. But you'd also like to keep your shirt. At Sears Brand Central, we can help your dollar go the distance. Because when you put a system on SearsChargePlus, you get flexible credit terms and low payments—as little as *$39* a month. Whether you're doing your taxes, building a treehouse or improving your putt, you'll find lots of *software* to get you started. In the *latest* formats, from multimedia CD-ROM to Pentium. Plus top name systems like Apple, Compaq and Packard Bell. A computer's a big investment. So shop *Brand Central* and get more byte for your buck.

SEARS

Actual monthly payment can vary depending upon your account balance. $400 minimum purchase required to open SearsChargePlus. APR 21%. Minimum finance charge 50 cents. Both lower in some states.

Not Just the Fax

The advantages and disadvantages of using your computer for sending and receiving fax messages

VOICE/DATA/FAX modems, which have dropped in price to around $150, can turn your computer into a fax machine and an answering machine. But be careful: they can only supplement, not replace, your stand-alone fax and answering machines. Here's why.

Outgoing fax

Using the computer to send a fax saves having to print the document and feed it into your fax machine. But if you want to send a paper document, you'll first have to scan it. Even if you own a scanner, this can be a long and tedious process.

Incoming fax

Fax modems and software let you view faxes on your screen and print them out. You can then use optical-character-recognition (OCR) software to turn the document image into text, which you can edit on your word processor. Fax modems can operate in the background, allowing you to use your computer for other purposes during transmission. However, your computer may run noticeably slower when the modem is in use. So only use your fax modem to receive documents you want to work on or save in your computer.

Voice

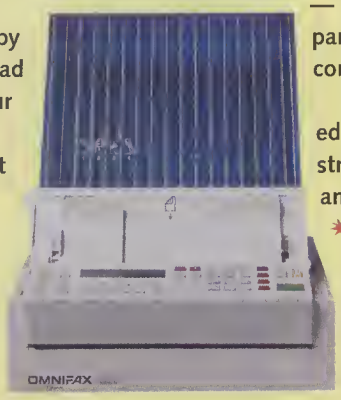
With good software and a proper modem, your computer can become a sophisticated voice-mail system, but there are some disadvantages to using a computer as an answering machine. Although an incoming voice call can slow down your system even more than a fax message, if you're working at the computer, you can answer calls yourself. If you want the voice-mail system to answer calls while you're working, however, you'll need to dedicate the computer to the task. Another consideration is that sound files take up a considerable amount of disk space, so you'll have to perform frequent hard drive housecleanings. FPC

Offices in a Box

They'll save you space and cash

You've cheerfully cleared a space in your home office for your computer and printer, and even found room for a fax machine. When the copy machine arrived, you had to say good-bye to your potted plant. Who knows where you'll put the scanner you hope to buy next month.

There is a solution to a cramped home office. Several manufacturers sell integrated office devices, which combine a fax modem, printer, copier, and scanner in a single box. Besides saving space, these devices save you money — at least $500 compared to buying separate components.



All-in-One The Omnifax G5.

Here are five integrated office devices with street prices of $1,000 and less:

- Omnifax G5 (fax, printer, copier, scanner) — $1,000.
- Hewlett-Packard OfficeJet (fax, printer, copier) — $800.
- Xerox 3002 (fax, printer, copier, $200 scanner add-on) — $1,000.
- Ricoh Fax800 (fax, printer, copier) — $750.
- Alacrity's Office-In-A-Box+ (fax, color scanner) — $599.

Although these devices can save you dollars and space, you should research your options before buying one. Ask for demonstrations of several devices and compare functions such as print quality and speed, as well as the software that comes with them. Be sure to buy from a business that offers on-site service. If your device needs repairs, you'll be out an entire office in one fell swoop.

wouldn't it be nice to buy a COMPUTER from someone WHO'S down-to-earth?

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SEARS

Creative Computing

MULTIMEDIA

It's a Girl!

Announce the arrival of your newest family member with the color and sound of multimedia

by Cristine Santo

THERE'S NO TIME more special for a family than the arrival of a baby. The relief, joy, and sense of pride are things you want to share with the entire world. A multimedia birth announcement is the perfect way to do it, because you can mix photos, words, sounds, and even video clips. Imagine sharing with computer-using friends and family a slide show featuring your favorite snapshots, complete with thought balloons and an older sibling's narration. Put the slide show on a disk for a great gift and an even better archive for the family history.

The announcement described here (see How To instructions on page 234) features ten pictures of your newborn, complete with sound and glowing colors.

The ideal software for this project has a slide-show module and lets you save your presentation in a "stand-alone" format (consider Kid Pix 2 or Kid Pix Studio from Brøderbund, 800-521-6263 or 415-382-4400; Mac and Windows CD-ROM, $45 street). This format lets people without the software view the slide show. (They need to be operating on the same platform as you — Windows or Mac.) The people receving the birth announcement also need to be using a computer with sound capability to play and view (to full effect) the announcement.

This project can also be completed with any application that allows you to save in a format such as a QuickTime movie, though the image resolution suffers slightly compared to the stand-alone format.

The first step in this project is to have a loaded camera (or video camera) and to snap away when the birth takes place. The all-important shots include a pudgy Mom before the baby is born (with children if this isn't your first), Mom and baby in the first moments of seeing each other, dazed Dad in scrubs holding baby, bundled baby with older sibling looking on, baby in crib looking wide-eyed at the place she'll call home, and all the family members together, including the family pet.

First, you'll need photo images saved in a format that can be easily manipulated within your computer. If you have your favorite photos scanned and saved on disks (.BMP for Windows, PICT for Macs), be forewarned that you can get only one image per disk at low resolution because of the space it takes. Quick-print shops or service bureaus can usually do this for about $10 per image. Some photo-developing houses such as Seattle Film Works (800-445-3348) and Clark Color Lab (301-595-5300) offer a developing service that includes putting an entire roll of film on a disk for between $15 and $21. (See "Floppy Photos" on page 213 for more information.)

If you have a CD-ROM drive, you can have your favorite photos dropped onto a CD. (You can get as many as 100

Freeze Frame The images above and below are individual slides from a Kid Pix slide-show presentation.

images on a disc for about $60, plus $10 for the disc. Call Kodak at 800-235-6325 for CD-processing information.) All CD-ROM drives manufactured in the last two years are Photo CD–compatible, so you can access the photos directly through most programs.

Frame the photos in color and add stamps or illustrations made with the drawing tools. Kid Pix 2 and Kid Pix Studio come with tons of images to choose from, and you can further customize stamps to your own needs with a stamp-editing tool.

Add thought and statement balloons on candid shots. Kid Pix comes with a text tool, but don't rule out having an older child use the pencil tool to write her own words. Kids' writing is so much more appealing, visually, and they will enjoy the artistic aspect of writing with a drawing tool.

The sounds should be fun little sound bites, not repeats of the text on the images. This is a perfect activity for an older sibling. So once the presentation has been nearly completed, sit your son down and have him describe the scenes in the picture and tell a little story. Just hold the microphone plugged into your computer up to his lips and click on the record button. One minor point: sound files can be memory hogs, so keep each sound bite only five to ten seconds long.

FamilyPC Tip:
The life span of a digital file is widely debated. However, if a file is copied and saved periodically, it can last indefinitely.

If you add video images, you'll need to have additional equipment, including a video-capture board and software. One small clip 30 seconds long can eat up 1.5 megabytes, so plan to include only a brief clip or two if your announcement is to serve as an archive that will remain in your hard drive. They are inserted into your slide show like any other element.

But using just still images is impressive enough, especially if you take advantage of some of the special effects built into Kid Pix. Transition effects are especially well suited to this project. They let you choose the way the slide show moves from one image to another — from dissolve to fade to wipe effects. You can have a screen explode into the next or even unzip. There are also great prerecorded sounds. Kid Pix also lets you program the presentation in a continuous loop, or play for a certain preset time.

But that feature becomes redundant when people get a chance to see your multimedia birth announcement, because they will want to play it again and again. Just keep a spare copy handy — when the news gets out on this hot number, everyone will want a copy.

Cristine Santo *is a mother of two children and lives in western Massachusetts. She is a regular contributor to* FamilyPC.

Video on the Horizon

Adding full-motion video of your ten-year-old holding her newly born little sister into a multimedia birth announcement is a daunting task, even with a newer multimedia PC.

You need video-capture hardware to digitize video from a VCR, camcorder, or video tuner (this lets you store it on your hard drive). You'll also need special editing software that will allow you to cut and splice video clips, create transitions between clips, and add titles or new sound tracks. Current software exists that will let you do this, but it takes time to master because it's mostly designed for professionals.

One of the biggest concerns, though, is that video requires huge amounts of storage space. One 30-second video image only 4 by 4 inches will take up 5 megabytes of hard disk space. If you want to work with larger images, even new Pentium machines bog down processing the information. And forget about getting it onto a floppy disk to give to a friend.

But better days for video presentations are coming. New video cards sporting the new MPEG standard (Moving Pictures Experts Group — see page tk in Keeping Pace for more information on MPEG), as well as improved information storage technology, will make manipulating videos with your PC much more feasible. And video-editing programs designed for the home will mean not only adding video to your favorite projects, but being able to afford to do it. So keep that camera rolling.

Star Child Manipulating video can be a challenge, but rewarding.

Creative Computing

MULTIMEDIA

Nuggets from '94

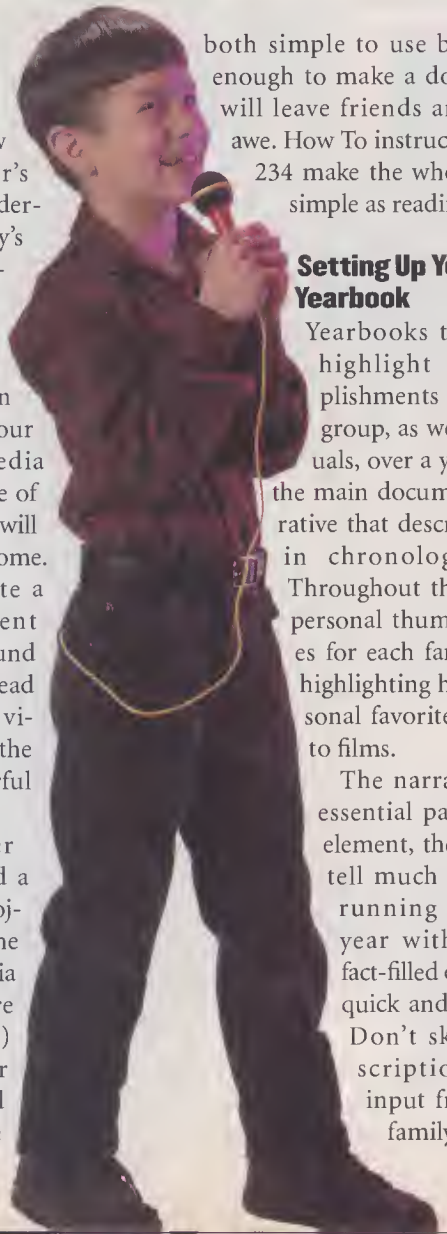
Create an archive of the best parts of this past year with a multimedia yearbook

by Howard Rothman

EVERY YEAR IS FILLED with moments that are perfect for a family yearbook. How about your daughter's graduation from kindergarten? Your dog Molly's litter of puppies? The summer camping trip on the shore of Lake Superior? Don't let these great moments fade or be trapped in an old photo album. Use your computer and a multimedia program to create an archive of sound, images, and text that will keep 1994 alive for years to come.

The project is to create a word-processing document stuffed with images and sound bites. Once it's set up, you read through the text, view the vibrant images, and click on the sound icon to hear a colorful narration from your child.

You'll need a computer with sound capability and a CD-ROM player for this project to work. (If you're in the market for a new multimedia computer, see the hardware reviews section on page 176) Either Microsoft Works or ClarisWorks is well suited for this project. They are both simple to use but powerful enough to make a document that will leave friends and family in awe. How To instructions on page 234 make the whole project as simple as reading a recipe.



Setting Up Your Yearbook

Yearbooks traditionally highlight the accomplishments of a featured group, as well as individuals, over a year. So set up the main document as a narrative that describes the year in chronological order. Throughout the text, insert personal thumbnail sketches for each family member highlighting his or her personal favorites, from food to films.

The narrative has five essential parts. The first element, the text, should tell much of the story, running through the year with a smooth, fact-filled delivery that is quick and easy to read. Don't skimp on description, and get input from all other family members.

The next element is pictures. Comb those piles of photo packages for special images that illustrate moments described in the narrative. The first step is to check the format that your word-processing program requires the photo to be saved as. Have your favorite photos scanned and saved on disks in that format. Some film-developing companies, such as Seattle Film Works (800-445-3348 or 206-281-1390) and Clark Photo Labs (301-595-5300), will put your pictures on a disk for between $15 and $20 (depending on the number of exposures).

Or if you have negatives, you can have favorite photos dropped onto a Photo CD. You get up to 100 images on a $10 disc for about $60. All CD-ROM drives made in the last two years are Photo CD–compatible. That means you can access the photos directly through most programs.

Below the pictures, write short captions in a bold, sans-serif font.

Next, you'll want images. Create your own in a separate paint program and insert them into your main document, or import existing images from a clip-art package or an online service. Add colorful icons for each month — such as a snowball with earmuffs for January. Insert the icon just before the month and then describe the events that took place.

Sound is one of the highlights of the presentation, and one of the most fun parts to incorporate. Your computer needs a microphone and software that lets you record, but that's standard equipment with a multimedia PC. When your presentation is nearly complete, invite family members to describe a special scene from the text or a photo. Keep the sound bites short — sound files are notorious for eating up hard drive space.

The last element, which is definitely the most exotic, is video images. This capability requires more equipment, including a video-capture board and capture software. And while we found that you can embed video clips in both programs, ClarisWorks handled multiple clips much better than Microsoft Works.

Video footage, like sound, takes lots of space, so be particular about what you want to show. (A 30-second, 4-inch by 4-inch reproduction eats up 5 megabytes of hard drive space.) Choose clips that show something clearly and distinctly: a few seconds of your son's first ride without training wheels is a perfect item for a video clip. Don't use more than two clips unless you're packing serious memory.

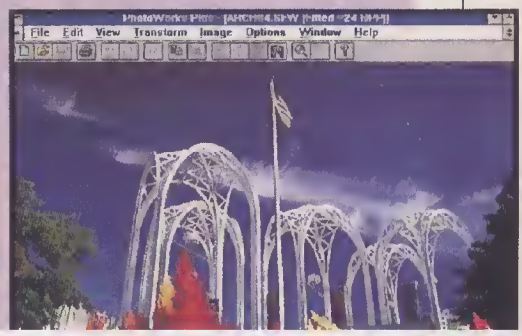
The narrative should start with January and recount the big events of the month: "Two blizzards dumped nearly six feet of snow on the ground. The skiing and snowboarding were great!"

The thumbnail sketches are where people can list their "favorites" and put some biographical information. What, for instance, was your favorite TV show? Who were your best friends? How old

Floppy Photos

Seattle FilmWorks offers an inexpensive way to get an entire roll of film on one disk

Are you dying to get your photos into your computer for home printing or multimedia projects, but you don't have a CD-ROM drive and don't want to pay the sometimes hefty fees service bureaus charge for scanning? Then Seattle FilmWorks could be your answer.



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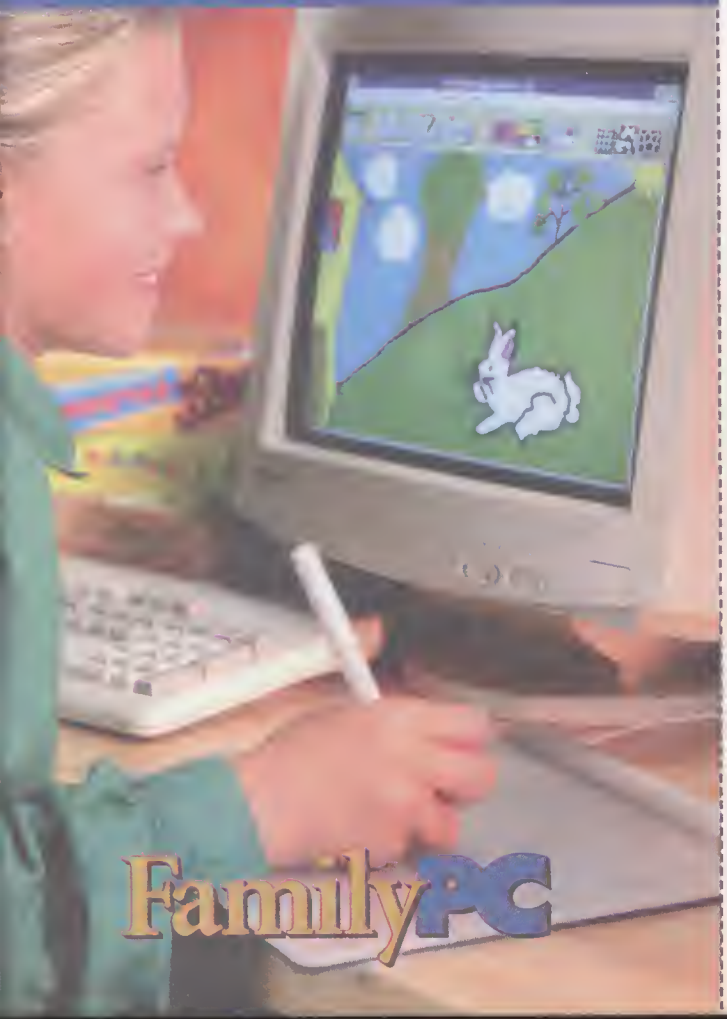

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Creative Computing

MULTIMEDIA

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EVERY YEAR IS FILLED

both simple to use but powerful

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The thumbnail sketches are where people can list their "favorites" and put some biographical information. What, for instance, was your favorite TV show? Who were your best friends? How old were you during the year, and what was your height and weight? Include favorite school subjects and big achievements.

A classic section for any yearbook is awards and projections. Student yearbooks usually name class standouts like "best dresser" and forecast future behavior like "most likely to succeed."

The last items are a cover page and a credits page. The cover should have your family's name in a bold, scripty font, with the subtitle "1994 Family Yearbook." Include a family picture and a sound bite of everyone saying hello.

The credit page (the last page) is much like the cover: One photograph — for example, of Molly the golden retriever — along with some fun text, centered, such as "Brought to you by Golden Memories, a publishing house that's a real dog." Add a final sound bite: "Here, Molly. Have a cookie." "Woof."

Howard Rothman *lives with his family in Littleton, Colorado.*

Floppy Photos

Seattle FilmWorks offers an inexpensive way to get an entire roll of film on one disk

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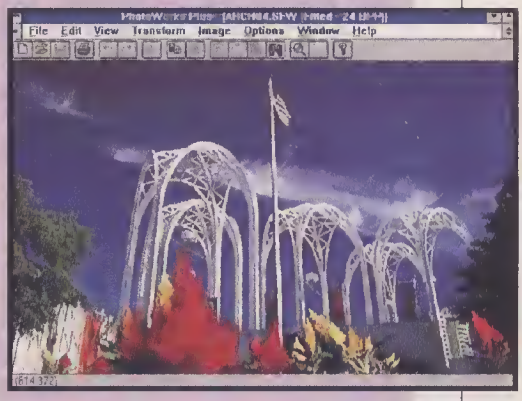


Crisp Colors Make the most of your photos with Seattle FilmWorks' film processing and software.

Seattle FilmWorks has for years provided quality film processing at a competitive price. Now it brings that same service to the photo-digitizing arena. All you need is a DOS or Windows PC — one that's a 386 or better — and 8 megabytes of free hard disk space.

This is how it works: Photos are scanned onto floppy disks with a resolution of 640 by 480 pixels in a compressed proprietary format so that you can have an entire roll on one disk. The cost is about $13 — $8.50 for a roll of twenty-four-exposure 35mm film prints and $3.95 for the disk.

The company includes free software that lets you access the photos and convert them into any of fifty file formats. That means you can import them into word-processing or paint programs, or even send them to a friend via modem. The software also comes with some basic photo manipulation, such as cropping, zooming, color enhancing, and rotation. The company hopes to have a Mac version of the software out soon.

Creative Computing

PUBLISHING

Stationery Station

All aboard the PC express to great writing paper for the whole family

by Miles Orkin

In this era of 200-page manuals, it's sometimes hard to believe that computers will make your life easier. Still, even the rawest PC novice has experienced the bliss of writing that first letter in a word-processing application — no Wite-Out! But why stop there? With basic word-processing and paint programs, you can turn your PC into a provider of professional-quality stationery on which to present your written notes and letters.

Whether you are writing a letter to a congressperson, submitting an anecdote to your alumni association, or dashing off a note to Grandmother, nothing spruces up the common communiqué quicker than custom letterhead. Here are directions for creating three different types of personalized stationery: classic and businesslike; arty and contemporary; and fun memo pad. You can save them all on your computer as templates, available whenever you feel like writing someone a letter.

One more thing — if you've ever ordered personalized stationery from a printer, you know the risks: limited selection of type styles and papers, a protracted wait for the finished product, possible typographical errors, and, worst of all, the expense. Doing it with your computer makes these concerns things of the past.

Letter Perfect

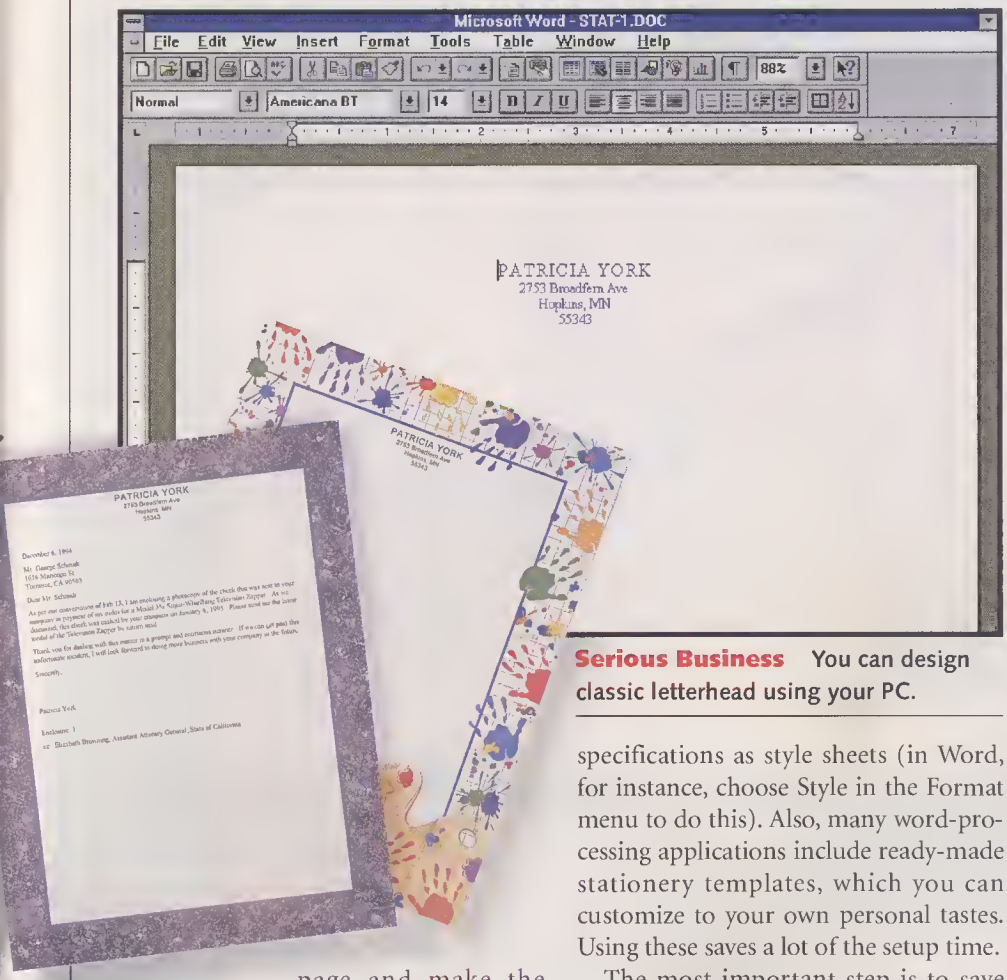
Let's get down to business — polished, classy, business stationery, that is. Just because your family isn't a Fortune 500 corporation doesn't mean that you shouldn't have professional-quality letterhead. Even an eleven-year-old demanding immediate delivery of a poster she ordered from a comic book three months ago will most likely get a speedier response if she types her request on special stationery.

If you're working from scratch (not with a template such as those that come with Word 6.0), open a document in your word processor and input your family's name and address. Put the name, street address, town and state, and ZIP code on separate lines. Add your telephone number if you like.

Select all the text and change it to a font that is classy but not too ornate. Times, Garamond, Bookman Oldstyle, and Palatino are all possibilities. Copperplate offers a slightly more streamlined look. All these choices fall into the serif family of fonts. That means the letter forms have little appendages (or serifs) on them, as opposed to the sans-serif family of fonts, which are streamlined, with no appendages. This more traditional look (serif) is ideal for business letterhead. Just try not to use a font that is too scripty, such as a handwriting font, or too digitized, such as Courier. Think understated but refined, like a Brooks Brothers suit.

Center the text horizontally on the

Launch Pad Create the master design for cool scribble pads with fun fonts and clip art.



Serious Business You can design classic letterhead using your PC.

page and make the name 14 points in size, all uppercase. If your application allows you to adjust the space between letters, open up the type a little bit (in Word, for example, choose Expanded type in the Character dialog box under the Format menu). Make the address text underlined, and insert tabs at the beginning and end of the text to extend the underline about an inch on either side. You can use the line tool to draw the lines if you find this difficult.

The next step is to set up the rest of your document so that every time you want to use it, the format is already in place. Set the font (preferably the same or similar to your name and address font), point size, indent, line spacing (single-space), and space between paragraphs for both text and dateline. You'll also need to define the margins, header and footer, and page setup (choose portrait). Then save those specifications as style sheets (in Word, for instance, choose Style in the Format menu to do this). Also, many word-processing applications include ready-made stationery templates, which you can customize to your own personal tastes. Using these saves a lot of the setup time.

The most important step is to save your letterhead document as a template (or "stationery") in your word processor. This is as easy as choosing the Save As command under the file menu and then selecting Stationery within the dialog box. From now on, opening this file will give you a new, untitled file every time.

Your design is now nearly completed. The proof, however, is in the printout. Try some samples on plain, white paper. Alter the point size, line spacing, and general position on the page, and print out revisions until you're satisfied. Then, go out and get some quality paper.

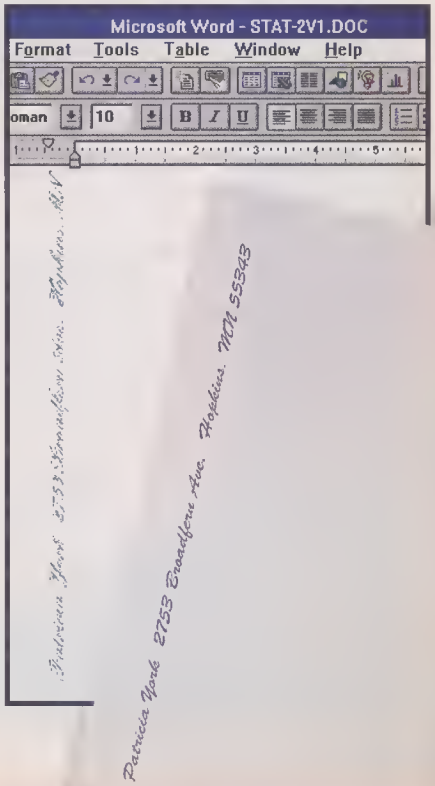
Your printer documentation will tell you the range of paper weight your printer will handle, and stationery stores, copy shops, and office and computer supply stores carry a variety of papers to choose from. Wove-finish paper is a good choice for business-style letterhead. It's textured but not too rough, fairly smooth but not overly shiny. A sheet of 20-lb. wove will give your stationery a quality look without appearing too grainy or arty. In the color department, you can't go wrong with white, but don't rule out a subtle cream, gray, or tan. If you're unsure, take some sample sheets home and run out proofs. Once you're satisfied with a particular look, buy a box or two. Don't forget matching envelopes.

With your electronic stationery on-screen, you'll be ready to fire off a letter to any given contact or associate at a moment's notice. Of course, if you really want to feel like a big-time businessperson, you might try dictating the letter to your child/executive assistant.

FamilyPC Tip:
Don't attempt to print out stacks of letterhead in advance with a laser printer, assuming you can run it through a second time when you want to print individual letters. Laser printers are notorious for choking on second passes.

Write Stuff

More arty, stylized stationery is perfect for less formal uses, such as a note to a new neighbor, a letter to an old friend, or suggestions for the PTA chairperson. Maximize your artistic flexibility by creating this stationery in a drawing or page-layout application. The fundamental art/text element is, of course, the same as in the business letterhead: name and address. What you do with this element, however, is open to innovation. Here is a list of do's and don'ts to keep in mind when making your design:



Stylin' Stationery Document frames make text manipulation much easier.

Cool Pad, Dude! A plethora of designs are possible when you use your PC.

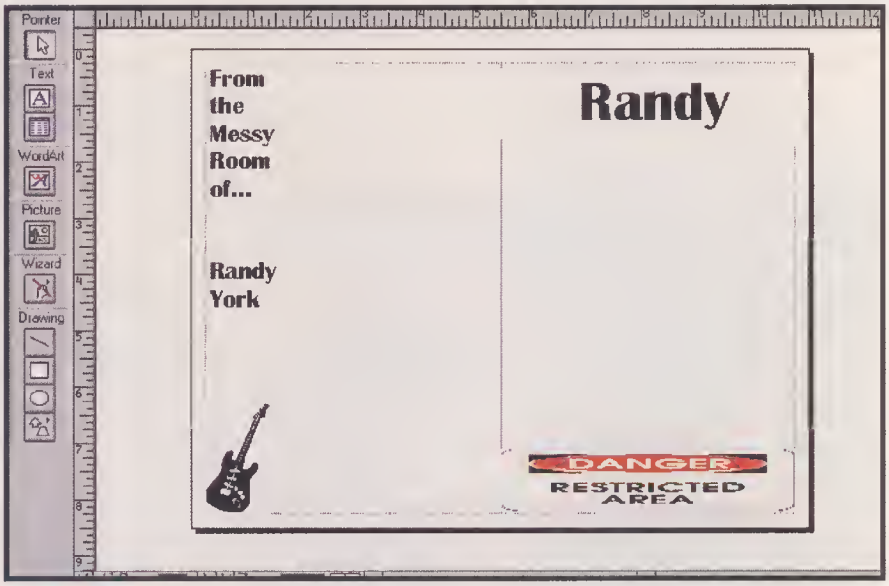
- Be wild with type, but still keep it readable.
- Keep art elements in the margins or headers.
- Focus your elements — random shapes are confusing.
- Limited type selection? Buy or download some new fonts (they are available as shareware through online services or in font packs from computer supply retailers).
- Sparseness is good — too much black ink is like a wet blanket.

Here are some more specific design ideas. If you're using a word processor to create the stationery, work in the drawing module for most of these ideas. (You can also work in a paint program and accomplish the same effects by inserting the art once it's created.) When the art is in place, scale it to the proper size.

The design feature here is having your name and other information (address and telephone number, perhaps) run up the left side of the page. Sans-serif fonts (without appendages) are good in this situation, because they tend to have a more streamlined, contemporary look. And if you have access to a color printer, by all means color any element you so desire.

First, within a word-processing program such as Word, create a frame where your art element will appear. Next, in the drawing module, put all the text, including your name, on one line. Try using all lowercase letters, no spaces, in a font such as Futura Extrabold, shaded gray. (You could also make the type white on a dark gray background.) Rotate the art so that it is sideways, running from bottom to top. Insert the line and your name into the frame.

Click on the inserted box and drag the sides so that the text becomes scaled. Make the letters wide and flat. Work the design until you are satisfied and then format the body of the text. Make the line spacing 1½ or 2 and use a basic font like Helvetica, with a point size of 14 or 18.



Fine Design Desktop publishing software makes pad design easy.

Don't forget to set margins and headers and orient page setup to portrait.

Once your design is set, save the file as a template (see description for the letterhead). That way you'll have an untitled document every time you want to dash off a note.

You'll probably want paper with a little personality. Linen and laid-finish papers still fall under the category of traditional stationery stock (and 20 lb. is still a good weight), but they have more visible lines and light color variations than their wove cousins. It's a less formal texture that should fit well with your hip design. If you want to get even wilder, take a trip to the stationers or the copy shop, or peek at a mail-order catalog from companies such as Queblo (800-523-9080) and Paper Direct (800-272-7377). You'll find papers that run the gamut from rough and rugged recycled earth tones to chrome-plated confetti candy colors.

Rad Pad, Dad

The third, and least formal, stationery will also probably be the stuff you use most often. It's a personalized 5½- by 8½-inch notepad, complete with a glued top edge, that you can tear a sheet from any time you need to dash off a quick thank-you note, a shopping list, or an IOU for an allowance advance.

Fire up your drawing program and open a page in horizontal mode (so that the dimensions are 11 by 8½ inches). Pull out a ruler guide to vertically bisect the page. At the top of each half, place a big headline that reads "From the Desk of [Name]" (or "Red Alert!" or "blah blah blah" or "Read Me" or any other catchy phrase). Use a font that resembles hand-lettering, such as Dom Casual or

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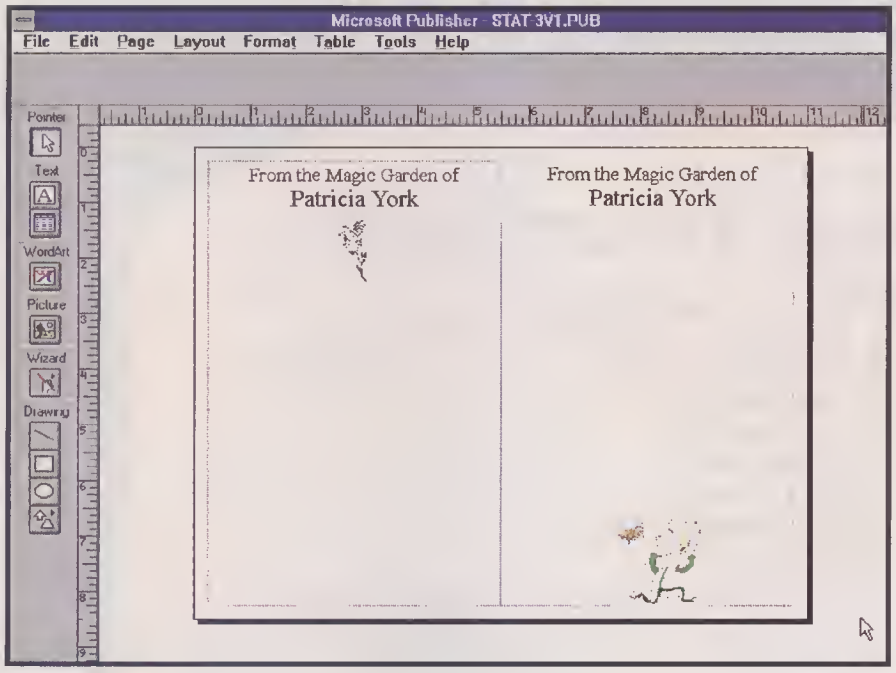


Scratch Pads You can make custom pads for yourself or your child.

Tekton, about 30 points in size. Better yet is a personal font that mirrors your handwriting. Signature Software (800-925-8840 or 503-386-3221) offers a variety of fonts starting at $29 that will make your note look handwritten.

Now it's up to you to spice it up. Try adding some clip art or dingbats relevant to the person whose pad it is — a partridge or two for a bird lover, Frankenstein for monster boy, a team logo for a sports nut. Change the headline copy to reflect the interests or personalities of the pad owner: "From the Secret Hideout of..." "From the Magic Garden of..." "From the Messy Desk of..." If you can't find a suitable illustration, create one yourself in a drawing or paint program and import it onto the page. (In most word-processing programs, this is as easy as choosing Picture under the Insert menu.)

Another fun art source is an actual photograph of the padholder. Just scan a candid at a service bureau, then use a photo-manipulation program such as Paint Shop Pro (available as shareware from many online services) to save a light-colored, low-contrast gray-scale version of the pic. Place this faded image on the document and scale it so that it fills the whole page. Make sure it's light enough to write over. The headline on this sheet can simply be "From:". Finally, check out your finished design in Print Preview to make sure that everything is in place and the two pages fit properly on one sheet of paper.

Once you're satisfied with the memo design, run out one master and then photocopy it at a copy shop. Paper quality is not as crucial in this situation, but you might want to take a step up from standard copy or printer paper. Try a slightly heavier weight, a pastel color, or maybe something with a fancier finish. A ream of 500 sheets of pastel-colored, laser-friendly paper will cost around $5 at an office-supply warehouse store. That's a lot of memos for your buck.

Finally, once all the sheets are printed or copied, it's time to get them cut and glued. Any short-run offset-printing shop (such as PIP or Sir Speedy) will offer these services, as will many full-service copy stores. Ask to have the sheets cut down the middle and then glued into fifty-page pads. Total cutting and gluing costs for a ream of paper should be between $10 and $20 — certainly a bargain for the quality, quantity, and individuality of the product you're receiving.

Happy printing. FPC

Miles Orkin *lives in the San Francisco Bay area.*

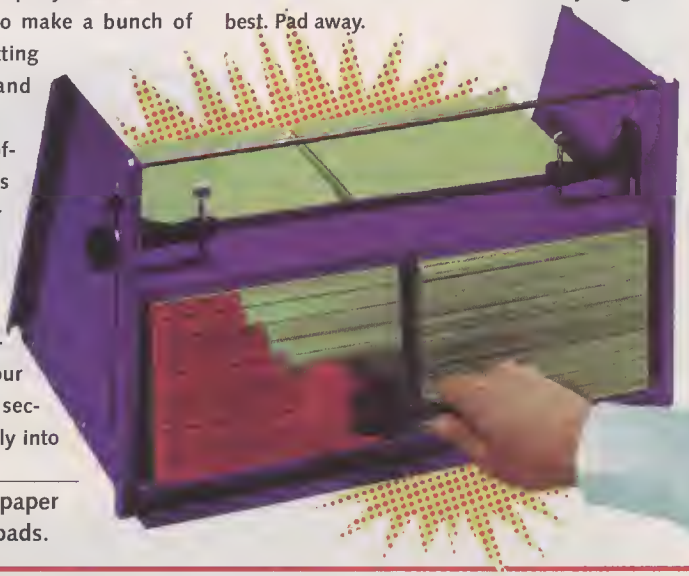
Pad Maker

Do your own stacking and gluing with Queblo's Jiffy Pad Making Press

Personalized party favors, birthday gifts, stocking stuffers — there's no limit to what you can do with the custom pads of paper you make with your PC. And if you plan to make a bunch of your own pads, consider getting a jig that lets you clamp and glue your own stacks.

Queblo (800-523-9080) offers the Jiffy Pad Making Press in its mail-order catalog for $120. While that's not cheap, the press is built to last. It's a metal frame with adjustable clamps and a removable faceplate. You stack your paper flush against the front section and then clamp it securely into place. Remove the faceplate and slather on the special padding glue. Since the jig is over a foot tall, you can make a bunch of pads at a time. Just separate each one with cardboard.

If the price is still a concern, consider that this jig is not only great for creating personalized pads but will also let you make scrap pads from paper that's had one side written on. Recycling at its best. Pad away.



Super Glue Stack your paper and slap on glue to make pads.

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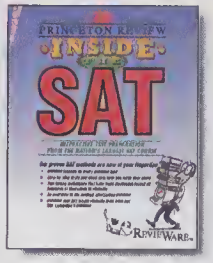

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Apple Peripherals

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Max Refresh Rate	70 Hz	70 Hz	90 Hz	90 Hz	105 Hz
Horizontal Scan Fre	31.5KHz	29KHz-38KHz	30KHz-57KHz	30KHz-64KHz	24KHz-82KHz
Dot Pitch	N/A	.28mm	.28mm	.28mm	.26mm
110-240 VAC (Auto-sensing)	Yes	Yes	Yes	Yes	Yes
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Our Family Cookbook

By Cathy Edwards

I WAS A SENIOR IN college when it finally occurred to me that my family's favorite recipes were unknown to all but Grandma Harrison. That's when I trekked up to Kearny, New Jersey, to spend an entire weekend in Gram's kitchen attempting to quantify "a big bunch of this and a spoonful of that." By the end of the weekend, I had recipes for beef barley soup, vegetable soup, lasagna, chicken chow mein, cherry cheesecake, and my favorite spaghetti sauce.

As an avid recipe collector, I have a special interest in tried-and-true recipes from family and friends. One of my favorite wedding gifts to give to family members and good friends is a book with proven recipes — a warm welcome to someone joining our larger clan and a nice introduction to family members who, by virtue of geography or past generations, cannot be introduced in person. It was in one of these homemade recipe books that my cousin discovered that Gram's chicken chow mein recipe lived on, prompting multiple requests for her recipes and inspiring a great idea — to create a family cookbook.

Of course, handwriting multiple recipe cards is not a practical approach to such a project; there's a much better alternative. From designing the cover and recipe template, to illustrating recipes with computer art, to generating a table of contents, this project is computer-perfect. And so, with memories of our feisty Irish Gram as inspiration, my family set out to publish a family album of favorite recipes.

Family Affair Cathy Edwards and her sons at work on their family-favorites cookbook.

The Initial Mailing

To whet everyone's appetite and give some initial direction to the project, we described our ideas in a mailing. We thought everyone would be happy to help as long as they understood exactly what we needed, so we were as specific as possible. Our first mailer included the following:

A letter explaining our project

My husband and I had fun writing this. Since our Christmas-card mailing list is already on our computer, it was easy to scan the database, mark relatives on my side and my husband's side, and print out labels. To move the project along, we gave family members two weeks to respond and

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ADDRESS _____

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(OPTIONAL) NAME(S) OF CHILD/CHILDREN _____

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made public our goal of publishing in time for the holidays.

A sample recipe page

We designed a format for our recipe pages and actually completed one page to help everyone picture what our cookbook would look like. To add some family flavor, we left space on the page for "Cook's Comments." Here we encouraged the authors to give a little history of how the dish evolved and relate memories or stories associated with the recipe.

We also welcomed suggestions on what to serve with the dish, whether it could be made in advance, whether it could be frozen, and so on. Finally, we asked for illustrations and photos, encouraging help from the kids.

Blank recipe forms and a return envelope

Because we wanted to make participation as easy as possible, we included blank recipe forms to be filled in and sent back in the return envelope. We asked for recipes that were already committed to paper as well as those that weren't yet. We challenged the kids to create recipes for their favorite foods.

Our chapters were outlined as well:

1) *Appetizers, Snacks, and Beverages*
2) *Salads, Soups, and Vegetables*
3) *Breads, Pasta, and Rice*
4) *Meats and Main Dishes*
5) *Desserts*
6) *Miscellaneous:* Don't let our traditional categories inhibit your recipe selection. If you have great recipes for fun food-related projects like bird feeders or playdough, send them in.

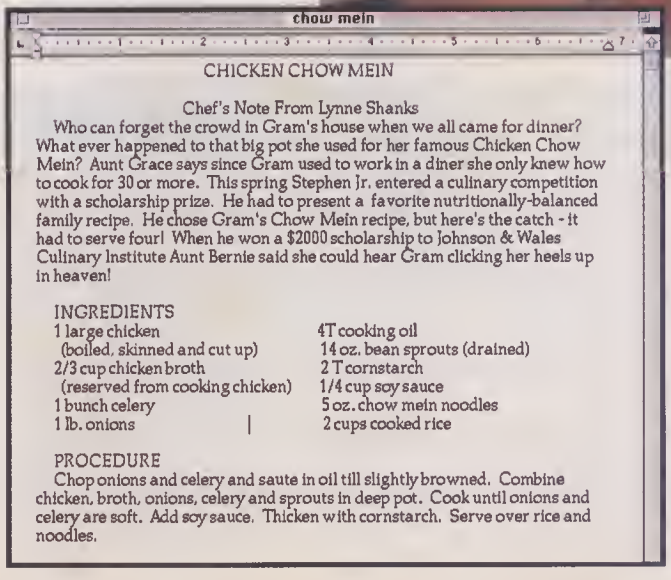
All Kinds of Art Our family cookbook allowed for both crayon- and computer-generated artwork.

A call for volunteers

"An opportunity...to lend your creative talents, family knowledge, and organizational skills to 'The World's Best Family Recipe Book.' " This was our recruitment campaign, and we included a return form:

❑ I volunteer to organize a recipe collection from this family group:
❑ Grace and Marshall Edwards and children. Plus Margaret Parry, Joan Leier, and Herb and Jean Thomas.
❑ Billy and Bernie Harrison and children.
❑ Audrey and Bill Ovington's children.
❑ Marilyn Powers and children. Plus Aunt Flo Doyle, Aunt Leigh Patterson, Aunt Daisy Edwards, and Aunt Lillian Mills.
❑ I can draw or computer-design art for the cover and chapter tabs.
❑ I can input and print out recipes on my computer.

What's Cooking? Cousin Stephen shows off his cooking prowess; and Gram's winning recipe.


chow mein

CHICKEN CHOW MEIN

Chef's Note From Lynne Shanks

Who can forget the crowd in Gram's house when we all came for dinner? What ever happened to that big pot she used for her famous Chicken Chow Mein? Aunt Grace says since Gram used to work in a diner she only knew how to cook for 30 or more. This spring Stephen Jr. entered a culinary competition with a scholarship prize. He had to present a favorite nutritionally-balanced family recipe. He chose Gram's Chow Mein recipe, but here's the catch - it had to serve four! When he won a $2000 scholarship to Johnson & Wales Culinary Institute Aunt Bernie said she could hear Gram clicking her heels up in heaven!

INGREDIENTS

1 large chicken (boiled, skinned and cut up)
2/3 cup chicken broth (reserved from cooking chicken)
1 bunch celery
1 lb. onions
4T cooking oil
14 oz. bean sprouts (drained)
2 T cornstarch
1/4 cup soy sauce
5 oz. chow mein noodles
2 cups cooked rice

PROCEDURE

Chop onions and celery and saute in oil till slightly browned. Combine chicken, broth, onions, celery and sprouts in deep pot. Cook until onions and celery are soft. Add soy sauce. Thicken with cornstarch. Serve over rice and noodles.

A Great Response

Our response was terrific. Within three weeks we had more than sixty recipes from twenty-five family members in seventeen different families — and plenty of volunteers to help us complete the project. Here's a taste of what we received:

- *Five-year-old Ross's crayon art* — a stack of orange pancakes dripping with something resembling syrup. This accompanied the Colored Pancakes recipe dictated by younger brother Tyler: "Put [pancake] mix in the bowl and put water in it and stir it and stir it

and stir it. Then you put [food] color in and stir it and stir it and see what color it makes. Then cook it."

- *A photo of my cousin Stephen donning his student-chef clothes.* This accompanied his version of Grandma's chicken chow mein recipe, which won Stephen a $2000 scholarship to Johnson & Wales University in Providence, Rhode Island (where he entered its well-known culinary arts program).
- *A computer-generated picture of Bananas Foster,* a recipe finally committed to paper by Stephen's father. In his college waiter years, Stephen Sr. had prepared the flaming Bananas Foster at Brennan's Restaurant in New Orleans' French Quarter.
- *A snapshot of my cousin Carol in her bee-keeping suit.* This was accompanied by a recipe from her seven-year-old daughter Emily on how to make a sandwich from peanut butter and homemade honey from their "pet" bees.

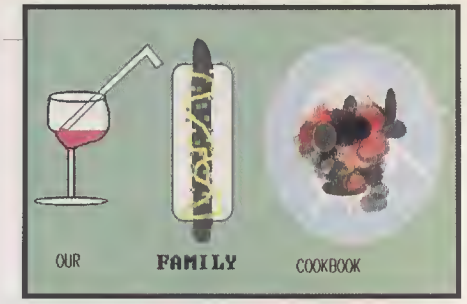
Piece of Cake Ross and Tyler's renditions of Gram Harrison's family-famous cherry cheesecake and vegetable soup.

Editing, Inputting, Layout, and Production

The three volunteers for recipe inputting happened to have WordPerfect in common, which was convenient for inputting. My sister-in-law and I were able to exchange messages electronically, which was a big help given our crazy schedules. We divvied up the inputting and sent our disks to a central coordinator (yours truly). We decided on a page-numbering scheme that would allow for adding recipes in the future: pages in the first chapter were A-1, A-2, A-3...and the second chapter ran B-1, B-2, B-3....A three-ring binder was chosen for the cover, again to allow easy updating in the future.

A great feature of WordPerfect 5.1 is its ability to automatically generate a table of contents. Each recipe was a separate file, so I first set up a master document linking all the files. Then I blocked the recipe titles and marked them for the table of contents. It took only ten minutes or so to learn how to define my table of contents, and when I generated the table it automatically picked up all the recipe titles and the page numbers. If we add recipes in the future, it will be simple to link the files, mark the recipe titles, and automatically generate a new table of contents.

For the next edition we also hope to use a scanner to help us import our photos and artwork electronically. For this time, except when creating computer-generated art, we settled for scissors and rubber cement to complete our page layout. A local printer captured and sized our art and photo elements, with color copying as needed, and we had the divider page of each chapter laminated.



Haute Cuisine Hot dogs, spaghetti, and soda, Tyler's favorite meal.

A Few Added Touches

More good ideas were generated as we moved the project along. My son's questions of "who's that" and "where do they live" prompted two ideas for the Foreword. One was to design a family tree, covering four generations of family cooks. For this project we used Family Tree Maker. Although the program can get complex, it also offers a quick route to creating a simple family diagram.

Another idea was to include a map of the United States, showing where the contributing cooks live — from Rhode Island to Florida, New Jersey to Colorado. For this, my five-year-old used Kid Works 2 to draw a map of the United States. He used various stamps to mark each family's (approximate) location.

For me, an extra bonus to this project is that now my favorite recipes are available at any time in WordPerfect — to print out instead of hand-copy whenever someone requests them.

An Electronic Twist on an Old Project

In her search for favorite recipes, my mom referred to an aging mimeographed recipe book created by my sister's third-grade class over twenty years ago. The teacher had asked each student's family to send a favorite recipe. The result — a Mother's Day present kept over twenty years. What a difference today's technology makes. FPC

Cathy Edwards, *a marketing consultant and writer, lives with her family in Darien, Connecticut.*

Color Your Cookbook

Even if you have only a black-and-white printer, a trip to the local copy shop can help you produce a colorful cookbook. Here are a few tips to add color to your family treasure:

- If you want to include family photographs in your cookbook, bring the negatives to a developer to be put on a Photo CD. Then insert the photo on the appropriate page.
- Once you've completed the cookbook, copy the file to disk and bring it to a copy shop that has a color printer.
- To include hand-drawn artwork, you will have to cut and paste it onto the page after the book has been printed.
- Once all the artwork is included, have the printer make color copies.

Now you can use your computer to draw a smile.

That's right. You can now use your PC to draw smiles, laughs and even hard-to-draw things like affection and appreciation. All you need is Gift Maker, the new software that lets you easily create one-of-a-kind, personalized presents that draw the most wonderful responses no matter what the occasion—birthdays, holidays, school celebrations, or the company picnic.

Here's how it works: First, pick from over 35 gift items—mugs to mousepads to teddy bears and more. Next, start designing. Use Gift Maker's 300 templates, 30 different typefaces, and 500 graphic images. Even include your own photos or graphics. When you're finished, follow the interactive ordering screen that automatically totals the order and gives you the choice of sending in your computer file directly by modem or on disk. Within days, the gift you created is on its way back to you or to the "gift-getter," complete with card and gift wrap.

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The Easy Way to Create Personalized Gifts

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Inside Your CD-ROM Drive

Squeeze a library of information onto one disc

By Ron White

MULTIMEDIA CAN BE A MIXED BLESSING. It makes a computer easier and more fun to use by adding graphics, video, and sound, but it demands large disk files to hold all that data. Even today's large 400-megabyte hard drives don't have enough storage space to hold your application software and data files *and* all the video, graphics, and sound that come with multimedia programs.

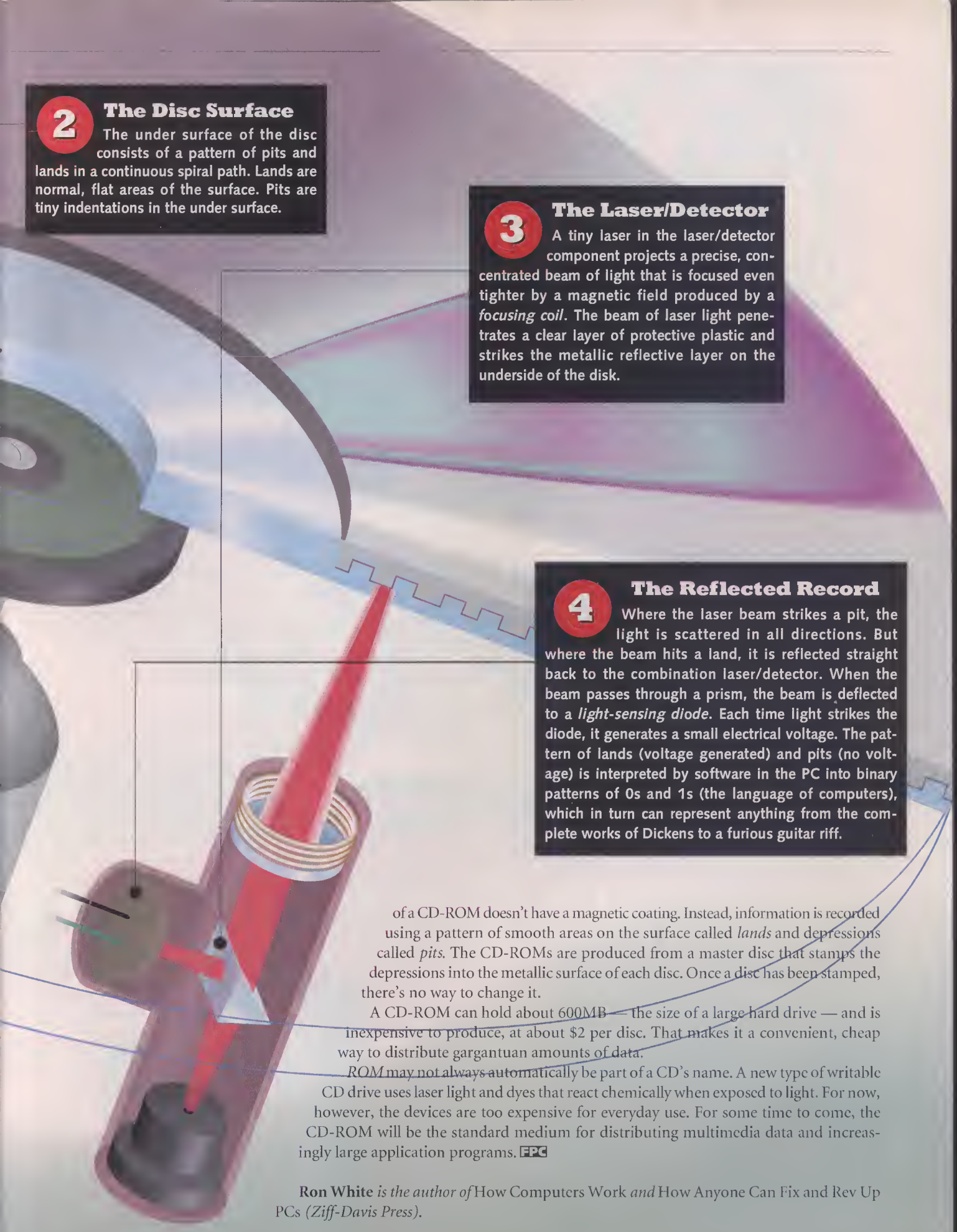
The solution is the CD-ROM (compact disc–read-only memory). The discs you run in your CD-ROM drive are a variation on the compact disc you listen to music on; they are the same physically, and beams of laser light are used to read the information on each — audio in the case of the more common music CD, and software code, words, graphics, video, and audio in the case of the computer CD. *Read-only memory* refers to the fact that you can only read the data that comes prestamped onto the disc. You can't record new data to the disc, just as with a music CD you can't replace a Michael Bolton track with music by Guns N' Roses.

A CD-ROM doesn't record information using magnetism, as is the case with a floppy disk or the hard disk inside your PC. Drives that use magnetism can alter the magnetic polarity of the particles on the surface of the disc as many times as you like. The surface

1 The Spin Doctor

A motor continually varies the speed at which a CD-ROM drive spins the disc, so no matter where the component called the *laser/detector* is located in relation to the CD-ROM, the surface of the disc above the laser/detector is always moving at the same speed. As the detector moves toward the rim of the disc, the disc slows down. This relationship between the speed of the disc and the position of the detector is called *constant linear velocity*. This provides a more efficient way to store large amounts of data compared to a hard drive, which always spins at the same rate. For this same reason, however, CD-ROM information takes longer to access than information on a hard disk.

Illustration by Timothy Edward Downs



2 The Disc Surface

The under surface of the disc consists of a pattern of pits and lands in a continuous spiral path. Lands are normal, flat areas of the surface. Pits are tiny indentations in the under surface.

3 The Laser/Detector

A tiny laser in the laser/detector component projects a precise, concentrated beam of light that is focused even tighter by a magnetic field produced by a *focusing coil*. The beam of laser light penetrates a clear layer of protective plastic and strikes the metallic reflective layer on the underside of the disk.

4 The Reflected Record

Where the laser beam strikes a pit, the light is scattered in all directions. But where the beam hits a land, it is reflected straight back to the combination laser/detector. When the beam passes through a prism, the beam is deflected to a *light-sensing diode*. Each time light strikes the diode, it generates a small electrical voltage. The pattern of lands (voltage generated) and pits (no voltage) is interpreted by software in the PC into binary patterns of 0s and 1s (the language of computers), which in turn can represent anything from the complete works of Dickens to a furious guitar riff.

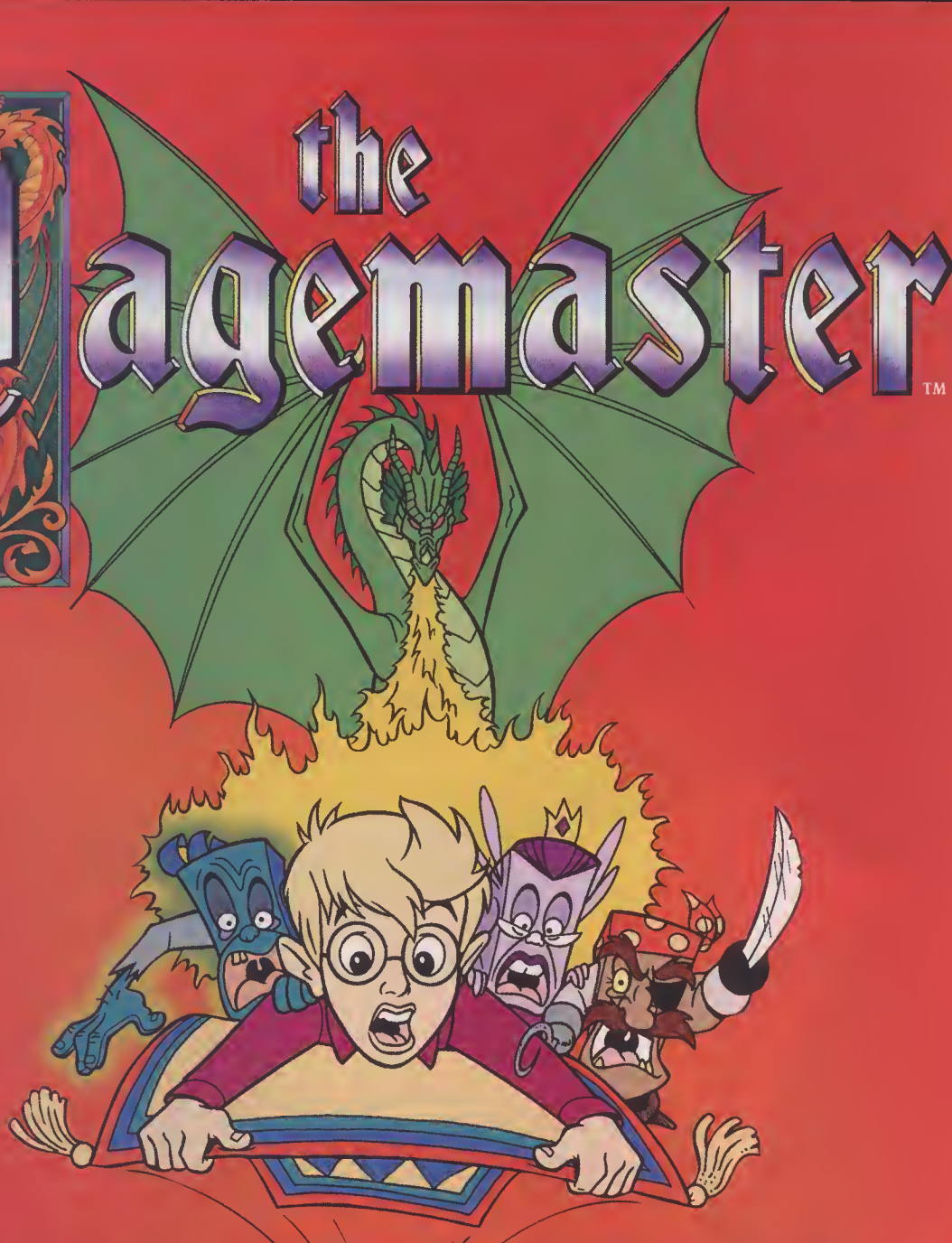
of a CD-ROM doesn't have a magnetic coating. Instead, information is recorded using a pattern of smooth areas on the surface called *lands* and depressions called *pits*. The CD-ROMs are produced from a master disc that stamps the depressions into the metallic surface of each disc. Once a disc has been stamped, there's no way to change it.

A CD-ROM can hold about 600MB — the size of a large hard drive — and is inexpensive to produce, at about $2 per disc. That makes it a convenient, cheap way to distribute gargantuan amounts of data.

ROM may not always automatically be part of a CD's name. A new type of writable CD drive uses laser light and dyes that react chemically when exposed to light. For now, however, the devices are too expensive for everyday use. For some time to come, the CD-ROM will be the standard medium for distributing multimedia data and increasingly large application programs. FPC

Ron White *is the author of* How Computers Work *and* How Anyone Can Fix and Rev Up PCs *(Ziff-Davis Press).*

the Pagemaster™



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TURNER INTERACTIVE

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TURNER HOME ENTERTAINMENT

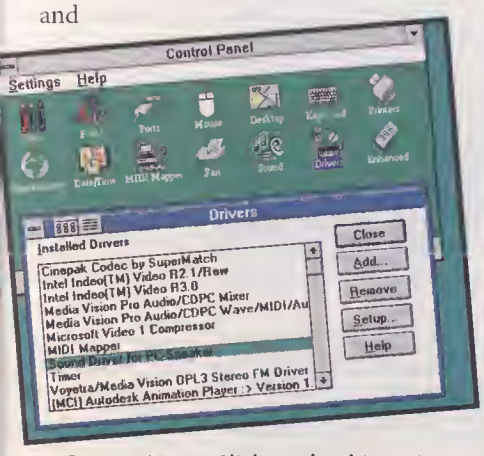
Step by Step Beyond the Beep

Adding audio to system events on your Windows PC or Macintosh is a sound idea

By Jack M. Germain

YOU WALK up to your computer and start it up, and it says "You rang?" in that unforgettably deep bass of Lurch, the Addams Family butler. Or it greets you at start-up with a few riffs from the *George of the Jungle* theme or your favorite Jimmy Buffett tune. Better yet, at shutdown your computer says "I'll be back" in Arnold Schwarzenegger's thick Austrian accent.

It's not difficult to associate sounds with system events such as start-up, shutdown, disk insert or eject, notifications, warnings, and even different keys and key combinations. If you own a Macintosh or a multimedia-ready Windows system with a sound card installed, you can customize your system with its own unique audio personality with a few minor tweaks.



Driver's Seat Click on the drivers icon in the Control Panel to install SPEAK.DRV.

On a Macintosh, go to Control Panels and open Sound. You can assign one of six sounds as your basic alert sound. If you want to extend the number of system events (and sounds) that your ready-to-speak Mac can make sound off, you need a sound manager (see "Macs, Sound Off," page 232).

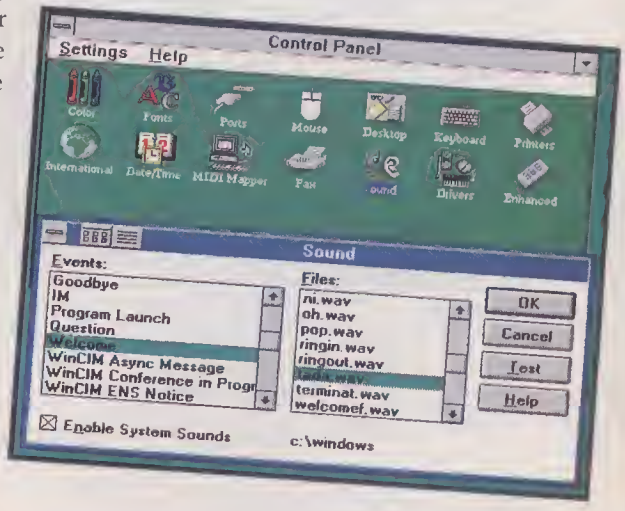
On a multimedia-ready Windows machine, a system sound manager is already installed. If you're adding a sound card, a sound manager comes with the collection of software and drivers and should install along with the rest of the software. Assigning sounds to system events is as simple as going to the Control Panel, choosing Sound, and matching the sound (.WAV file) to the event (see Step-by-Step directions below).

You can further customize your multimedia PC or Mac with sounds you record yourself using utilities you control the way you would any tape recorder. Most Macs ship with a microphone for recording sounds. Simply plug it into the correct socket in the back of your computer, go to the Control Panels, and select Voice Record. On a Windows PC, you need to purchase a microphone separately and plug it into your sound card. In the Accessories group, Windows 3.1 has a sound utility program called Sound Recorder that works just like the Mac Voice Recorder. To add a new sound (like your child saying "Mommy!"), select New from the File menu in Sound Recorder. Click the Record button and speak (or have your child speak) into the microphone. Press Stop, go to the File menu, choose Save As..., and give the file a name (such as MOMMY.WAV).

On a higher-end Mac or a PC with a sound card and speakers, Lurch's bass will be rich, the *George of the Jungle* theme punchy, and Arnold's accent realistic enough to convince you that your PC may be an ancestor of the Terminator prototype. However, even if you have an economy-model Windows PC or an older 386 computer with a tinny internal speaker, you can get some sense of sounds fairly simply.

Installing the Windows Speaker Driver

To breathe new life into your soundless Windows PC without adding an expensive sound card and external speakers, you can install SPEAK.DRV. The sounds played by your computer's tiny internal speaker aren't great, but the speaker driver lets you get a taste of what a sound-capable computer can do. Once you start using sound effects for system events, you may decide to go to the next step in audio advancement and add a sound card yourself.



Audio Action Associate your favorite sounds with the appropriate system event.

Microsoft didn't include the speaker driver on Windows installation disks, but there are several ways to get it (see the box below). Without this driver, the only sound the computer makes is a simple beep.

Installing the speaker driver is easier and less expensive than adding a sound card and drivers. First, copy SPEAK.EXE into the \Windows\System directory and double-click on the filename. Microsoft recommends installing the file in the DOS directory, but this is simpler, and I've had no problems putting it here. The file will uncompress into three files: SPEAKER.DRV and two text files. Now, switch to the Windows Program Manager screen.

- Double-click on the Control Panel icon.
- Double-click on the Drivers icon and click once on the Add button.

This brings up a dialog box that lists the installed drivers. The first item on the list — Unlisted or updated Driver — is already highlighted. Click on the OK button.

- Click on the Browse button and highlight the \Windows\System directory in the dialog box. Click on the OK button again.

Do not select the button that says Restart Windows Now. Instead, click on the Cancel button so you can associate different sounds with different system events. Whether you use the tiny internal speaker or a sound card and stereo speakers, you must assign sounds to various system events:

- Double-click on the Sound icon in the Control Panel. Click on the Enable System Sounds box at the bottom of the screen so it shows an X.
- Highlight an event by moving through the Events column on the left of the screen by clicking on the scroll arrows in the box.
- Highlight the sound you want to associate with the selected event.
- Click the Test button on the right side of the dialog box to hear the sound. When the settings are the way you want them, click on the OK button to save them.

Windows 3.1 comes with four .WAV files: tada, ding, chord, and chimes. You can add more sounds from shareware programs and software libraries on bulletin board systems and commercial online services. (There are some in the libraries of FamilyPC Online.) Store any new .WAV files in the \Windows directory, and you won't have to do any special tweaking of the system control files to use them.

Another way to to test .WAV files is to click the sound icon twice in the Control Panel folder to get a list of sounds. Sound files are listed in the box labeled *files*. Highlight a file name — for example, RIDDLER.WAV — and click the Test button to hear a crafty cackle realistic enough to send shivers through the most courageous of Caped Crusaders.

Jack M. Germain *is a freelance writer who lives with his family (and their shared PC) in Barnegat, New Jersey.*

Where to Get the Windows Speaker Driver

You can get your hands on the Windows speaker driver in several ways. It comes as part of the Windows 3.1 Resource Kit, which you can order with $19.95 and the coupon that comes with the Windows manual. You can call Microsoft Sales at 800-426-9400 to order it.

Better yet, if you have a modem, you can get the file for free in just a few minutes. Use your computer and modem to dial Microsoft's Customer Support bulletin board at 206-637-9009. If you have an account on CompuServe, download SPEAK.EXE from the Microsoft Forum Library (Go MSL) or from America Online in FamilyPC Online's Windows Feature File Library (Keyword FamilyPC).

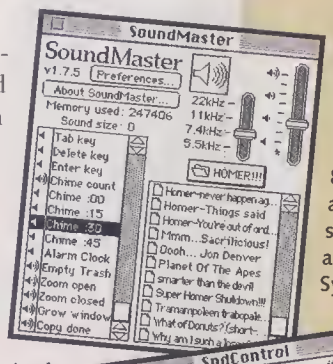
Macs, Sound Off

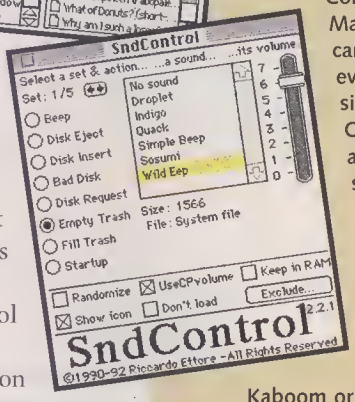
Sounds from Start-up to Shutdown

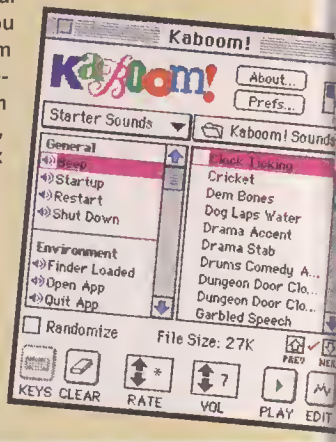
While Macintosh users love to show off the sound capabilities of their computers, they aren't getting the most out of their built-in speakers if they haven't added a sound manager that can link dozens of system events to sounds.

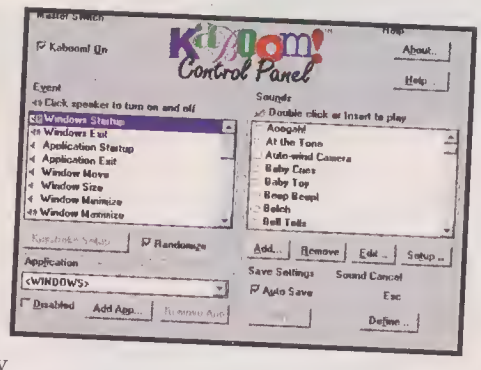
Shareware sound managers, such as the $25 The Sound Manager Package and $15 SoundMaster (available on America Online in FamilyPC Online, in the Macintosh Feature File Library), turn your Mac into a center of sizzling system sounds. The hottest commercial sound manager, Kaboom (Nova Development, 800-395-6682 or 818-591-9600, Mac or Windows disk, or MPC and Mac CD-ROM, $49.95), is available for both Macintosh and Windows. To get started on your audio adventure, simply install Kaboom or download The Sound Manager Package or SoundMaster and put the control panels that come with them in the Control Panels folder in the System folder on your hard drive. (If you are using System 7 or higher, drag the Control Panel to the System folder, and your Mac will put it in the right place.) Now you can associate sounds with dozens of system events — from Beep to ZoomOut, from Resize Window to Empty Trash. There are even Chime settings for planned wake-up calls, and SndControl has special PowerBook settings for PowerBook-only events such as Plug In, Plug Out, Sleep, and Wake Up.

If you are using Sound Manager, store sounds in the System file in the System Folder; store them in a separate Sounds folder if you're using SoundMaster or Kaboom. As a bonus, you get dozens of cool sounds with Kaboom or when you send in your registration fee for shareware sound managers. Sound good? Great.









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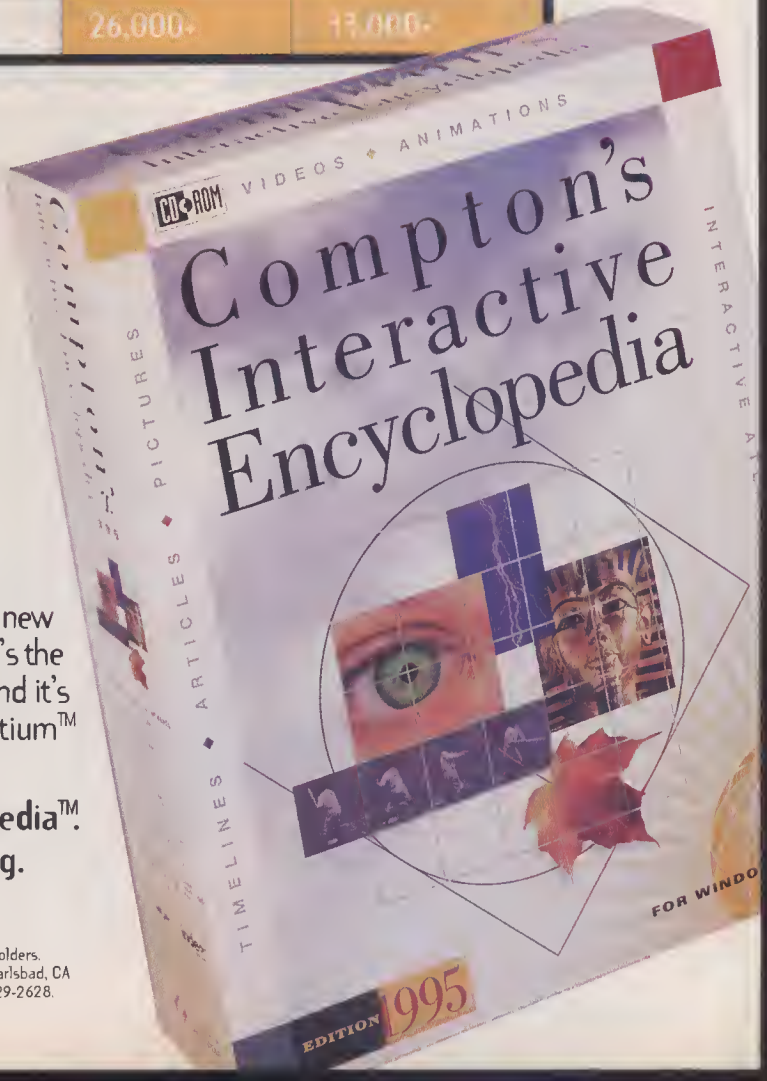

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It's a Girl! P.210

It's a Girl!

A multimedia birth announcement

Tools

- Kid Pix 2 or Kid Pix Studio (Mac and Windows CD-ROM, $45 street; Brøderbund, 800-521-6263 or 415-382-4400)
- DIgitized (scanned) pictures
- Microphone and/or tape-recorded baby sounds (optional)

Estimated Time: 45 minutes

1 Launch Kid Pix 2 or Kid Pix Studio.

2 Open a new drawing document to create the title slide.

- If you are using Kid Pix 2, you are automatically in the draw/paint canvas. In Kid Pix Studio, you need to click on the large picture frame.
- Click on the paint bucket and choose a color for the screen background.
- Switch to word-processing mode. (In Kid Pix Studio, click on the typewriter. In Kid Pix 2, hold down the Control key and click on the Letter icon.)
- Click on a large font on the palette at the bottom of the screen. Choose a color for the title letters by clicking on the color palette.
- Click where you want to place your title text and begin typing.
- Click on the Stamp tool and use stamps to liven up the screen. Increase Stamp sizes by holding the Control or Shift key.
- Save the slide. Go to the File menu and choose Save. Give the slide a name, such as Slide_1, and click on Save.

3 Create additional slides, such as one announcing the new arrival's birth time and weight, in the same way. To create a new slide, go to the File menu and select New.

4 Create slides with embedded photos.

- Go to the File menu and choose Open a Picture. Select the scanned-in or PhotoCD image file that you want to load, click on the Center radio button, and then click on Open. (Select the Preview box to see a thumbnail version of the pictures in your collection so you can be sure you get the one you want.)
- Outline the picture by choosing the Straight Line tool. Select a broad line from the choices at the bottom of the screen, and a color from the palette. Click near a corner of the picture and drag to another corner, laying down a border. Repeat until the picture is framed.
- If you like, you can repeat this process with another color, producing nested borders around the picture.
- Click on the Paint Bucket tool and choose a color for the background. For a lighter color, click on one of the dot patterns at the bottom.
- Now, move the Paint Bucket outside the framed picture and click to fill the background with color.
- Add a caption to the picture the same way you added text to the title screen. Create cartoon thought balloons by drawing them with the Paintbrush or a combination of the Circle and Pencil tools. Use the Paint Bucket tool to fill them with white, then the Text tool to write your lighthearted comments.
- Save each slide.

5 Add voices to slides.

- Go to the Goodies menu and choose Record a Sound.
- If you have prerecorded baby cries, simply plug the tape-recorder output into the microphone input port of your computer. Click on the Record button and turn on the tape recorder or speak directly into the microphone.
- Click the Play button to see if you like the sounds you recorded.
- Click on Save to attach the sound to the slide.

6 Put together slides in a slide show complete with dissolves and wipes (slide effects), sound effects, and varying duration.

- In Kid Pix Studio, select SlideShow from the main screen. In Kid Pix 2, go to

Seen and Heard

Sure, your children should be seen and heard, but remember that adding audio, video, and pictures adds size to your files

With faster hardware and easier-to-use multimedia authoring tools coming to market, home multimedia is catching on. But all this multimedia content comes at a price, especially in terms of hard disk space.

An average 3 by 5 photo scanned at 150 dots per inch (the minimum acceptable resolution) will take up around 1 megabyte of space. At 200 dpi, the file grows to more than 1.5MB. Sound files are not as large as image files, but they still require substantial amounts of space. While the size of an image depends on the resolution, a sound file's size largely depends on how it is digitized (the quality of the sound). Typically, sound files are around 20,000 bytes (20 kilobytes) per second of sound. Most Mac and multimedia Windows systems have sound-recording capability, though a microphone is not always provided (see "Beyond the Beep," page 231).

Video requires even larger amounts of storage space. A tiny 30-second video image, approximately 2 by 2 inches, will take more than a megabyte of disk space, even with data compression. A short 4 by 4 inch video clip will more than quadruple the space to 5MB. This isn't bad in terms of hard disk storage, but delivering multimedia video productions to friends or relatives is difficult since floppy disks only hold 1.4MB.

Some Macintosh and PC models come with video-capture hardware built in, but most will need an additional board to digitize video from a VCR, camcorder, or video tuner. Most video-capture cards come with software that allows you to cut and splice video clips, create transitions between clips, and even add titles or new sound tracks to your home multimedia presentations (see "Video on the Horizon," page 211).

the Switcheroo menu and select Switch to Slideshow.

- Note that each red truck on the screen represents one slide in the slide show. Click on a truck to add a slide.
- Click on the Slide icon (the small, empty picture frame at the bottom of the truck). Choose a slide you created and click on Open. If you have video clips to embed, select them in the same way.
- To add sound effects, click on the Musical Note icon. Click on a sound icon to choose it. Click on Preview if you wish, and then, if you like what you hear, click

Select. Remember that you don't want to add sound effects to any slide that already has sound attached to it.

- Vary the duration of the slide presentation by dragging the time slider under each truck. A box will tell you how long, in seconds, that slide will be shown. The minimum duration for any slide will be the length of any attached sounds or sound effects.

7 Add transitions between slides, such as allowing the new slide to come in from the left, over the old slide, dissolve, or wipe.

- Select the slide by clicking on the truck it is in.
- Click on the Transition icon at the bottom of the truck (it looks like a diagonal staircase with an arrow).
- Choose the transition that works best for the incoming slide, and click on Select.

8 Try out your slide show by clicking on the Play button at the bottom of the screen.

9 Save slide show in one of two formats — one you can modify if you wish; another you can distribute to friends without Kid Pix.

- Go to the File menu and select Save as Slideshow...
- Give the show a name (maybe "ItsAGirl") and click on Save. You can open this slide show and modify any of the slides, effects, or sounds you've included.

OR

- Create a stand-alone slide show friends with the same computer (Mac or Windows) can view.
- Go to the File menu and select Save as stand-alone...
- Give the show a catchy name and click on Save.

Nuggets from '94 P. 212

A Multimedia Yearbook

Tools

- ClarisWorks for Windows 3.0 (disk, $99; 800-325-2747 or 408-987-7000) or Microsoft Works 3.0 for Windows (DOS disk or Windows CD-ROM, $99; 800-583-0400 or 206-882-8080)
- Digitized (scanned) pictures, sounds, or video clips
- Clip art

Estimated Time: 2 hours

1 Launch ClarisWorks or Microsoft Works

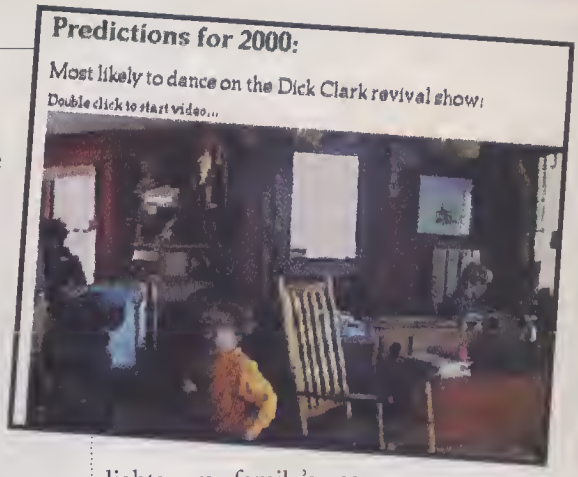
2 Begin a new word-processing document by clicking on the button.

3 Create a title page by typing one element per line — your family name, the year (1994), and Family Yearbook.

4 Select the text and give it a dressy font.

- In ClarisWorks, go to the Font menu and choose a font, such as Old English, and then pull down the Size menu and choose at least 48 Point (depending on the length of your name).
- Center the title by clicking on the Center Text icon.
- Pull down the Style menu, choose Text Color, and pick a color for your multimedia yearbook's title.
- In Microsoft Works, go to the Format menu and choose Font and Style... Or you can click on the arrow next to the current font to choose a new one.
- Choose a new font size and color; click on OK.
- Click on the Center Text icon.

5 Insert a photo on the title page that highlights your family's year (the arrival of a new sibling or a great trip).



- Position the cursor where you wish to put the photo. (Type a carriage return if you want to place the photo between lines of text.)
- In ClarisWorks, go to the File menu and choose Insert... Select the photo you wish and click on the Insert button.
- In Microsoft Works, go to the Insert menu and choose Clip Art or Object... Select the photo you wish and click on Open.
- In either program, after selecting the photo you want to include, you can resize it by clicking on one of the "handles" or squares that appear around the image.

6 Position the cursor at the end of the page and insert a page break (end of page).

- In ClarisWorks, go to the Format menu and choose Insert Break.
- In Microsoft Works, go to the Insert menu and choose Page Break.

7 Begin the monthly description of events.
- Insert an appropriate piece of clip art using the same process as in step 5 above.
- Resize the clip art by holding down the Shift key (to constrain movement so the clip art stays proportionately rectangular) and dragging the corner handle.
- Click on the Left Justify button to move the clip art.
- Tab or space over from the clip art and type the word "January."
- Select the word and change its font to something formal, like 36-point Palatino. Change the text color if you wish.
- Space down a couple of lines (by hitting Return) and begin your text in regular 12-point black.
- If you wish, insert a photo, as outlined in step 5 above.

8 Insert video clips or sound files (if you are using Microsoft Works) using the same process. Microsoft Works has separate menu choices on the Insert menu for multimedia objects (e.g., sound files and other miscellaneous objects). After choosing Insert Object..., click on the From File radio button and choose the appropriate file. Click on Open to insert the sound or video clip into your document.

9 Continue creating pages that correspond to the months of the year. Scatter in biographical sketches of family members. Add goofy predictions for the year or years ahead. End with a Credits page.

10 Save your work.
- Go to the File menu and choose Save.
- Give your file an appropriate name, such as YEARBOOK, and click on Save.

Stationery Station P. 214

Letter Perfect

Formal letterhead with built-in formatting

Tools
- Microsoft Word for Windows 6.0 (disk and CD-ROM, $329 street; 800-583-0040 or 206-882-8080)
- Printer

Estimated Time: 15–20 minutes

1 Launch Word and begin a new document.

2 Create the heading for your personal letterhead.

- Choose a font such as Times New Roman or Bookman. (If you go to the Format menu and choose Font..., you can preview the fonts on your system.)
- Type your name, street address, city and state, and ZIP code on separate lines.
- Select text and click on the icon that looks like centered text. Or go to the Format menu and choose Paragraph..., click on the Indents and Spacing tab, and set Alignment to Centered.
- Select the first line, go to the Format menu, and choose Font... On the Font tab, set the font size to 14 point. Then click on the Character Spacing tab, click on the arrow next to Spacing, and select Expanded. Click on OK.
- Select the other lines of the letterhead and set them to 10 point.

3 Decrease the top margin to about one-half inch to see how it looks.
- If you aren't in page layout mode, click on the icon in the lower-left corner that looks like a complete page of text (or you can go up to the View menu and choose Page Layout).
- Click on the vertical ruler along the left side of your document and drag it upward until the margin is where you want it.

4 Print out a test sheet to see if you like it and then make any adjustments you wish to the font size or style.

5 Open one of the letter templates that comes with Word 6.0 , such as Letter1.
- Go to the File menu and select Open...
- Click on the arrow next to List Files of Type: and select Document Templates (*.DOT).
- Select the Word Template directory (usually listed under the WinWord directory) and select LETTER1.DOT. Click on OK.

6 Replace the company name and address with the personalized heading you just created.
- Select [Company Name], [Street Address], and [City, State/Province ZIP/Postal Code] and then hit Delete.
- Switch back to your letterhead by going to the Window menu and selecting Document1.
- Select your letterhead text and copy it to the Clipboard by clicking on the Copy icon (or go to the Edit menu and choose Copy, or hit Ctrl-C).
- Switch back to the template by using the Window menu. Position the cursor at the place where the company name was, and then paste in your letterhead heading (click on the Paste icon, go to the Edit menu, and choose Paste; or hit Ctrl-V).

7 Replace the generic [Your Name] and [Your Position] with your own nom de plume. You may want to eliminate the [Typist's Initials] entry from the template, too.

8 Change the font size (and style) of the text

SAVE★SAVE★SAVE★SAVE★SAVE★SAVE★SAVE

COMPUTER CHECKS

QUICKEN, SIMPLY MONEY, MICROSOFT MONEY AND MANY MORE!

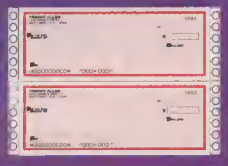
Designer CHECKS
P.O. Box 13387 • Birmingham, Al. 35202

CONTINUOUS FEED CHECKS

Continuous feed checks are 9 1/2" wide (8 1/2" without lineholes) and load straight onto your tractor feed printer without moving your sprocket.

Business Size

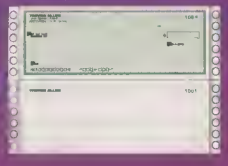
Item	Single	Duplicate
250	$ 24.95	$ 39.95
500	37.95	54.95
1000	57.95	89.95
2000	89.95	149.95



Stop wasting time hand writing checks! Continuous and laser/inkjet checks are guaranteed bank compatible. Finest quality checks are available and at the best prices too! Available with or without file copy. Save additional time by using window envelope (A).

Business Size (with voucher)

Item	Single	Duplicate
250	$ 29.95	$ 44.95
500	41.95	62.95
1000	64.95	99.95
2000	99.95	169.95



Quality business checks that reflect your company image are available in the quantity and price that you require. Available with or without file copy. Bill payment is made easier by using window envelope (A).

Wallet Size (continuous feed)

Item	Single
250	$ 24.95
500	37.95
1000	57.95
2000	79.95

Wallet size checks are 6" wide and come with an adjoining stub to record your transactions. All of our checks are printed utilizing the latest in printing technology to insure you the highest quality checks available. Use with window envelope (W).

Choose from 4 stylish colors!

Classic Blue | Gold | Green | Pink

LASER/INKJET CHECKS

Laser/inkjet checks come three to a page, measuring 8 1/2" x 11", and can be placed directly in your printer's paper tray. For printing one or two checks, order laser/inkjet check savers.

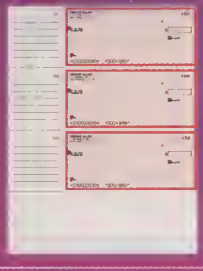
Item	Single
250	$ 29.95
500	42.95
1000	59.95
2000	88.95

Business Laser (with voucher)

Item	Single
250	$ 39.95
500	57.95
1000	79.95
2000	128.95

Wallet Size (laser/inkjet)

Item	Single
250	$ 24.95
500	39.95
1000	62.95
2000	89.95



CHECK SAVERS

Item	Price
Continuous Check Saver (set of 5)	$7.95
Single Sheet Check Saver (set of 5)	$7.95

The simplest, most cost effective way to stop form waste and spare accounting time. Check Saver saves the first form of a continuous string when feeding into impact printers and are reusable.

With laser Check Saver, laser and inkjet printers can now handle smaller single forms, like checks, labels, envelopes or odd-size documents. And remember, Check Saver is reusable!

DEPOSIT SLIPS

Item	Price
Deposit Slips (2 books of 100 each)	$12.95

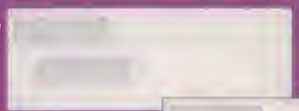
Preprinted with your account number and name and address, to save you time. When ordering, please enclose one of your current deposit slips.

ENVELOPES

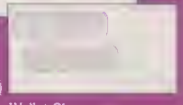
Double Window Envelopes

Don't waste time addressing envelopes! Guaranteed to work with your checks!

Business Size 8 3/4" x 3 3/4"



(A)



(W)

Wallet Size 6 1/4" x 3 5/8"

Item	Business & Wallet
100	$ 9.95
250	19.95
500	29.95
1000	44.95
2000	69.95

SOFTWARE COMPATIBILITY LIST

Quicken, QuickBooks, Accounting Plus, Andrew Tobias, At Once!, BACS, Business Sense, Certiflex, Check-Mate, Checks & Balances, Church Management System, DAC Easy, Dollars & Sense, Evergreen, Flexware, Fred's Checkbook, Great American, Great Plains, H & E Computronics, Home Accountant, Hooper International, INTUIT, MacMoney, Managing Your Money, MCBA, Meca Software, Micro Associates, MicroBiz Corp., Microsoft "Money", MYOB, Money Matters, Monogram, Open Systems, Pacioli 2000, Peachtree Software, Rags To Riches, Realworld, Royal Software, SBT, Simply Money, Simply Accounting, Systems Plus, Time Is Money, Yardi Systems

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2. Include deposit slip from existing check supply.
3. Enclose your payment check.
4. Fill out the order form and mail with items 1, 2, & 3.

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Your software: Version:

PAYMENT INFORMATION ☐Continuous ☐Laser
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☐VISA (13 or 16 digits) ☐MasterCard (16 digits)
☐Check enclosed (Payable to Designer Checks)

Credit Card Number:
Expiration Date:
Name on Credit Card:
Cardholder Signature:

Please check that your credit card number has been filled in completely.

ORDER FORM P03F0195

ORDER INFORMATION (OR USE SEPARATE SHEET)

Item Description (Complete on Lines Below)	Color	Quantity	Starting Check Number*	Price
		Subtotal		
		Sales Tax (Alabama residents add 8%)		
		Shipping and Handling		$5.00
		Order Total		

* If no starting number is indicated, 1001 will be used

Note: All orders shipped in 7 working days

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Address:
City: State/Zip:
Daytime Phone Number:
(Fax Number:)

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Designer CHECKS
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below your letterhead to a readable 11 or 12 point (minimum).

- Select the entire region: Click once to the left of the date. Move to the end of the template and, holding down the Shift key, click once after cc:[Name].
- Change the font or font size by going to the Format menu and choosing Font...

9 Decrease the top margin as you did in step 3.

10 Save the template back into the template directory, with a new title.

- Go to the File menu and choose Summary Info...
- Type a distinctive title, such as MY LETTERHEAD, and click on OK.
- Save the design by going to the File menu and choosing Save As...
- Save the file as LTRHEAD.DOT in the Template directory.

11 When you want to write a business letter, choose LTRHEAD as the template when you begin, rather than NORMAL. The date will fill in automatically, as will your stylish letterhead features.

Stationery Station P 214

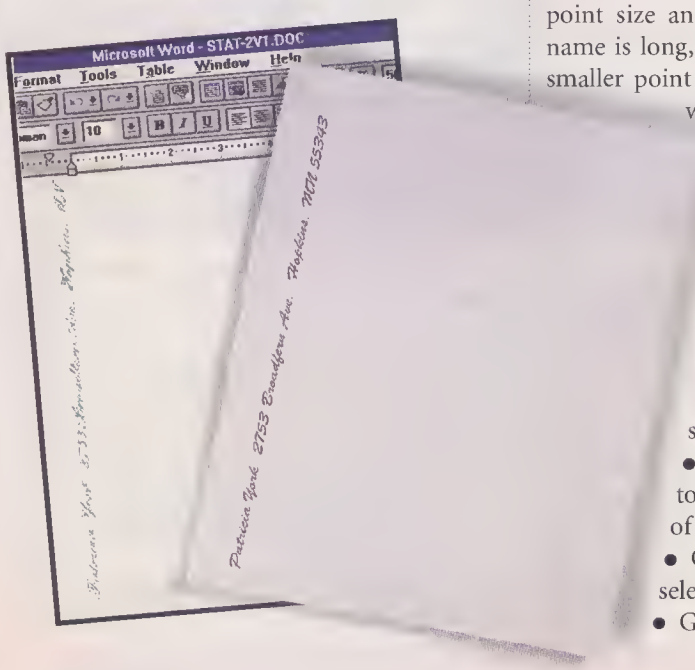
Write On

Less formal letterhead with flair

Tools

- Microsoft Word for Windows 6.0
- Printer

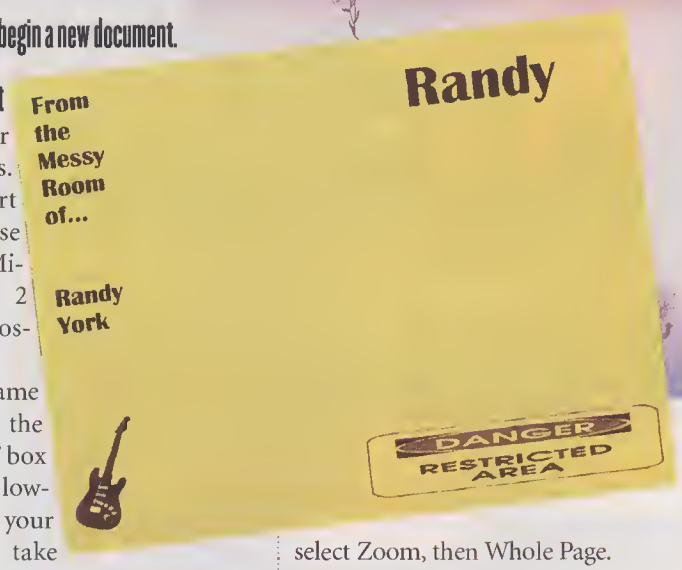
Estimated Time: 15–20 minutes



1 Launch Word and begin a new document.

2 Create a WordArt object with your name and address.

- Go to the Insert menu and choose Object... Select Microsoft WordArt 2 from the list of possible art objects.
- Type your name and address into the "Your Text Here" box (you can use all lowercase letters, or your nickname, to take away the sense of formality). Leave an extra space between elements (where you would normally have carriage returns).
- Click on Update Display.



3 Rotate the text so that it reads down the left margin.

- Click on the Rotate icon, or go to the Format menu and select Rotation and Effects...
- Enter -90 degrees into the Rotation box and click on OK.

4 Choose an appropriate font and color for your letterhead text.

- Click on the arrow next to the current font and select a fun font, such as Stencil or Gothic.
- Click on the arrow next to the current point size and select 32 point (if your name is long, you may have to choose a smaller point size; if it's short, you may want to go even larger).
- Go to the Format menu and choose Shading...
- Click on Foreground Color and choose a desired color.
- Click on OK.

5 Change the view so you can see the entire page.

- Click outside the text area to return to the regular view of the document.
- Go to the View menu and select Page Layout.
- Go to the View menu and select Zoom, then Whole Page.

6 Stretch the text to fit the page.

- Click outside the text area to return to the regular view of the document.
- Click on a handle at the top of the text box, and stretch the box so the top of it lines up with the top margin of your newly minted letterhead.
- Click at the bottom of the text box, and stretch it so the bottom lines up with the bottom margin.
- Click on a side handle and drag horizontally until you get the shape you desire (stretching distorts some fonts).

7 Save the letterhead as a template so you can "tear off" a page any time you want.

- Go to the File menu and select Save As...
- Click on Save File As Type and select Document Template.
- Give the template a name, such as CASUAL.DOT, and click on OK to save it in the Templates directory.
- Now, when you want to write a casual letter with a little flair, choose CASUAL as the template when you begin, rather than NORMAL.

Stationery Station P 214

Note Pad

A scratch pad to take notes on

Tools

- Microsoft Publisher (disk and CD-ROM, $99.95; 800-583-0040 or 206-882-8080)
- Printer

Estimated Time: 15–20 minutes

1 Launch Microsoft Publisher.

2 Begin a new document.

- Click on Start from Scratch (make sure Full Page is selected), and click on OK.

3 Set up the page layout.

- Go to the Page menu and choose Page Setup...
- Click on the Landscape radio button and click OK. (You're going to produce two notepad sheets for every standard-size sheet of paper).
- Go to the Layout menu and choose Layout Guides...
- In the Margin Guides box, change each of the margins to 0.25 inch.
- In the Grid Guides box, change Columns to 2 and click on OK.

4 Create a text box in the left column of your note pad.

- Click on the "A" text button.
- Change the font to whatever suits your fancy (Times, New York, and Palatino are pretty easy to read and present well).
- Change the font size to about 32 point (or smaller if your name is long). You can select the current size displayed and type in a new value, rather than choosing a value from the drop-down list box.
- Click in the upper-left corner of the page, just inside the margin, and drag down and right to create a box for your heading. Stop before the center line that cuts the paper in half horizontally.
- Click inside the box and type something like "From the Desk of... JoeP."
- Resize the text box to create the effect you like by grabbing one of the resize handles and dragging.

5 Import a graphic or two to spice things up.

- Click on the Picture button.
- Click in the upper-left corner where you would like to put the graphic, and drag down and right to create a box for it.
- Double-click inside the box to bring up a graphic selection dialog box.
- Choose a piece of clip art from the selection provided with Publisher, or from any other collection, and click on OK.
- Click on the Change the Picture to Fit the Frame radio button and click on OK.

6 Copy the left side of the page (the one you just created) and paste it on the right, or create an entirely different look. To copy:

- Select the element you wish to copy.
- Go to the Edit menu and select Copy Text Frame (or Copy Picture Frame).
- Go to the Edit menu again and select Paste Object.
- Drag the copy to the other side of the page you created.

7 When you're happy with both sides of the page, save the file.

- Go to the File menu and choose Save.
- Enter a name like NOTEPAD.PUB and click on OK.

8 Finally, print out a sheet. Go to the File menu and choose Print, then click OK. You can continue printing pages for your note pad, or you can print only one and have a whole lot copied and bound.

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Now, with **Discovering Endangered Wildlife**, your children can learn about one of the most important topics of their generation, taught through fun games and activities designed for children ages 9 and up. With stunning nature photography, wildlife sounds, and narrated text, children learn about the habits, diets, daily routines, and key threats to endangered species.

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LYRIQ

Great Holiday Gift!

YOUR KID CAN COME TO FUTUREKIDS AFTER SCHOOL AND MISS THE BUS. OR HE CAN GO HOME AND MISS THE BOAT.

The last bell rings, books are closed and your child thinks school is over. But it can't be. Because the truth is, they've only learned half of what they need to know. You see, while reading, writing and arithmetic were enough to get you through school, they're not enough to get your child through.

Experts say by the year 2010, computer skills will be a prerequisite for virtually every job in the country. So the question is, who's going to teach these skills to your child? Well you can, if you know the difference between a megabyte and gigabyte. But if you don't, you should consider bringing your child to Futurekids.

It's a place where kids can learn everything imaginable about computers. But it's more than that. It's where kids learn as much about themselves as they do about the machines in front of them. Where they discover how to design a robot or make their own baseball cards.

All projects are undertaken in small groups based on age and ability and coached by a caring teacher. So that your child graduates not only with an understanding of computers, but a passion for them.

To learn more about Futurekids or to find out where the nearest center is located, **call 1-800-PRO KIDS.**

FUTUREKIDS®
COMPUTER LEARNING CENTERS

It's your kid's future. But it's your call.

INSIDE Check out GigaBrain's picks for top games and tricks ➤➤➤

MEGAzine

the computer magazine for kids

This teenage BBS operator provides valuable information

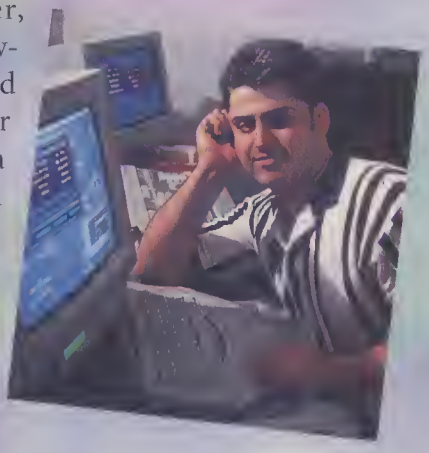
MEGAprofiles:

Michael Simmons: ANSWER MACHINE

WHEN MEMBERS of the Palm Springs, California, Police Department detected a bug in their computer system, they called their own high-tech version of 911 — a bulletin board system (BBS) owned and run by sixteen-year-old Michael Simmons. Result? Bug squashed.

Michael's hugely successful BBS, called DataPort Network Information System (DNIS), provides one-stop shopping for online customers. "We try to give everything on a one-call basis — you don't have to go to five different services," says the young businessman, who started tinkering with computers at age eleven.

Soon after he began cruising online, Michael realized he could do it better. "I didn't want to accept things the way they were. So as a hobby, I made a new system with a modem and a lot — a *lot* — of reconfigurations," he says. "When I had two or three lines going, I decided to turn it into a business."



Four years later, business is still growing (he made around $500,000 last year and has more than a dozen PowerPCs and Macintoshes). The real problem now is finding free time to enjoy his non-computer interests, such as going to football games and hanging out with friends. "I do everything I used to do, just not as often," he explains.

Michael graduated early from high school and plans to attend college in a few years. He has already been offered jobs developing software so computers can talk over phone lines, but for now, he is quite happy to stick with his own business.

Does Michael have any advice for other kids with great ideas? "Find something people want and no one else has," he advises, "and then figure out how to make it happen."

Computer-Generated Illustrations by Sara Krohn

Ask GigaBrain

Bootleggers beware; gamesters prepare (to try it before you buy it).

To Copy or not To Copy

Dear GigaBrain:

I've been told not to copy other people's software or let other people copy mine. Why not?

Lisa Satenspiel, Brooklyn, NY

Dear Lisa:

The simple answer is that using bootlegged software is a crime. Copying software is illegal because it's the same as stealing. If you are caught with software you don't own (technically you never own software — it is "licensed" to you to use — but that's another story), you could be fined a lot of money or even have your computer taken away forever. You wouldn't steal from a store just because you didn't think you'd get caught, would you?

What's equally bad is that when you copy a program illegally (software piracy), the software publisher doesn't get a penny. Software companies lose billions of dollars in sales to piracy, and since programs cost companies a lot of money to create and distribute, the software makers deserve to be paid for it. If everybody steals software, pretty soon there will be no more Reader Rabbit, no more Carmen Sandiego, and (gasp) no more Myst!

So don't do it. And if you know people who are bootlegging software, be sure to show them a copy of this column.

Giggles

Q: What did the motherboard say to the floppy disk drive?

A: Close the door behind you, you're letting the dust in!

C'mon, kids — here's your big chance to become rich and famous (and earn Gigi's eternal gratitude). I need giggles, and I'll send out a MEGAsurprise for each one I use. I'll even print your name next to it. All you have to do is send 'em to the addresses on page 250.

Rent-A-'ROM

Dear GigaBrain:

I and my wallet and PC are wondering...will we ever be able to rent our favorite CD-ROM software the way we can rent movies?

Video Veteran, Reno, NV

Dear Rent-A-Be:

Have no fear, the try-it-before-you-buy-it idea is here. Blockbuster Video already has plans to expand its sixty locations that rent and sell CD-ROMs to hundreds more, and companies like Entertainment Technologies are working with some of the most popular software publishers, like Sierra, MicroProse/Spectrum Holobyte, Virgin, and others, to allow gamesters nationwide to rent their CD-ROM titles. So while Mom and Dad snuggle up in front of the tube to watch their favorite flick, you and your PC can be spinning the latest discs.

TOP TEN Things To Do With Your Parents' OLD PC EQUIPMENT

10. Hollow out the monitor and use it as an aquarium.

9. Convince your little brother or sister that monochrome screens are really cool.

8. Remove the cooling fan and use it on hot days.

7. Put a piece of glass on top of it and use it as a coffee table.

6. Get some wheels and make a keyboard skateboard.

5. Make a personalized collar for your pet by stringing together keys to spell its name.

4. Tape mousepads to your knees and elbows for an extra layer of skateboarding protection.

3. Launch the monitor out of a huge slingshot and tell Mom and Dad it's performance art.

2. Hang your hollowed-out monitor from a tree and use it as a bird feeder.

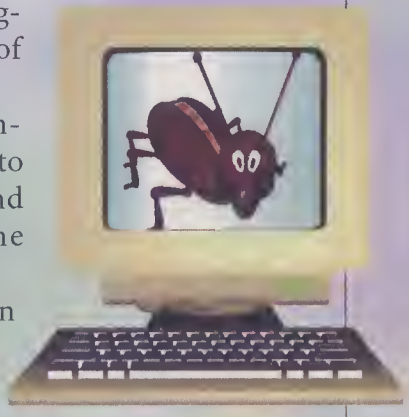
1. Load up all your educational software and then erase the hard disk.

Goofy Computer Tricks

Trick of the month: WinRoach

THIS MONTH'S PRANK, WinRoach, will make you run for cover — or wish you had a huge flyswatter. Still, we think you'll be able to stomach this trick better than last issue's MacBarf. If not, send us your ideas.

WinRoach unleashes a horde of roaches that scurry about on your desktop and hide behind windows. You can control the number of roaches, their speed, and their wandering frequency. The best part is that you can even squash the little buggers by clicking on top of their heads.



Easy to install and configure, WinRoach is sure to gross out your family and will ensure that no one snacks at the computer.

WinRoach is available in all the usual places: online services, user groups, and BBSes, or in the FamilyPC Windows Software library on America Online (Keyword `FamilyPC`).

BY David "Nuke" Nurenberg

The Gamester

Cyclemania by Accolade

Category: Simulation/Sports

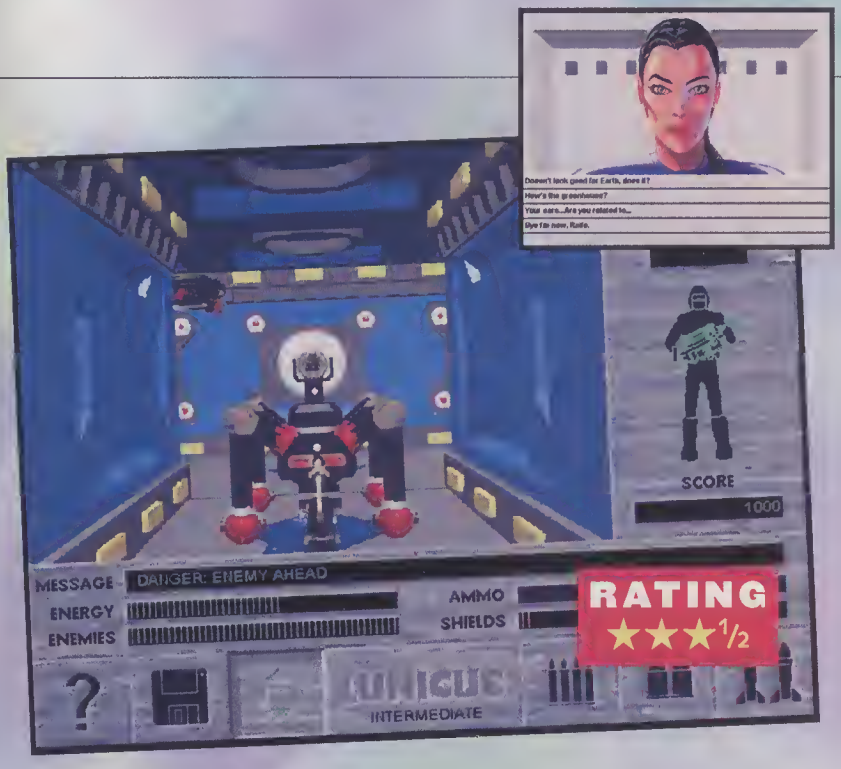
CYCLEMANIA is a motorcycle racing game that puts you in the seat of a high-performance racing machine. To fully experience the racing realism of this game, open up the throttle through a long, slow turn or lean in heavily on a mountain-road race course. Cyclemania offers a number of choices, from different tracks to different bikes. You compete against five computer racers or a friend over a modem. Just be aware that motorcycles are not the only things on the road — cars, trucks, cops, and cows litter the detailed scenery. Winning races brings more money to soup up your cycle, but one spin through an oil slick or a head-on collision can end your cycling career or leave you toppling from your chair.

Cyclemania by Accolade, 800-245-7744 or 408-985-1700; DOS CD-ROM, **$59.95**.

Giggles

Q: What does your mouse do during recess?

A: Play on the tool bars.



In Paramount Interactive's Lunicus, a dream discovery of alien artifacts turns into Earth's worst nightmare when the aliens come calling. A swift takeover ensues, and only a handful of Earthlings on the Lunicus moon base are free from their power. As a base soldier, you map out strategies to free your planet, suit up in your armor, grab a plasma blaster, and hop the next shuttle to Earth to free the planet. Lunicus combines enough action and humor to keep you saving Earthlings for many lunar cycles.

Lunicus by Paramount Interactive, 615-546-1157; Windows or Mac CD-ROM, **$70**.

Lunicus

By Paramount Interactive

Category: Action/Strategy

If Your Kids Have Questions, Have We Got The Answer For You.

CD-ROM Windows® & Macintosh®

What is a Bellybutton? Why do I sneeze? What happens to the food I eat? If questions like these sound familiar, you've come to the right place. *What Is a Bellybutton?* answers kids questions with the help of fun characters your kids will love. The stories and pictures, complete with sound effects and music will teach kids about healthy behavior and staying well, but most importantly they'll have a great time. So if you know someone with a lot of questions, get them the one CD-ROM with all the answers – ***What Is a Bellybutton?***

See your favorite software retailer or call (800) 432-1332, Dept. 376.

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The Gamester

Giggles

Q: What do slugger-wanna-be programmers use to play catch?

A: Microsoft-balls.

Dark Sun: Wake of The Ravager

By SSI Category: Adventure Role Playing

In Athas, a land of endless deserts and mutant monsters, the King vanishes — leaving you to save the populace from the sinister designs of wizard-dragons. In your quest, you have to solve a multitude of puzzles and defend yourself from dozens of monsters — no cakewalk. But under your leadership, your party can even the odds with spells and magic mental powers.

Dark Sun: Wake of the Ravager by SSI, 408-737-6800; DOS disks, CD-ROM, **$60.**

HOT TIPS

Happy Campers

Tired of the masses protesting in Sierra On-line's Outpost? Press Ctrl-F12 and change their morale to maximum. Now they'll be happy no matter what you do, at least for a while. If only this worked for your parents, too.

New Toaster

In Inca II, also from Sierra, space combat can get tricky for even the greatest of Incan warriors. To even the odds, hold down Shift, Alt, and Control, and press the fire key to get a nuclear blast that will toast the enemy. You can do this only five times, however, so save it as a last resort.

No Place to Hide

World War II pilots never had an advantage like this one: in MicroProse's 1942: Pacific Air War, press Alt-F1 to activate the virtual cockpit, and then press the *J* key after sighting an enemy. This special "padlock" view will keep the enemy in your field of view, no matter where he goes.

Tip of the Month: EASY ACCESS

Thaddeus Scheffel of Springfield, Ohio, sent us a hot tip that beats out our Rebel Assault passwords in the November/December issue! He writes, "When you see the LucasArts screen, do the following with your joystick: move Up+Fire, Down+Fire, Left+Fire, and Right+Fire, making sure you hold the button down as you move the stick. The game will say the word 'LucasArts' to let you know you did it successfully. Now you can choose any level you want by typing the level number (1 through 9, and then letters for levels above 9 — A = level 10, B = level 11, etc.). With this tip you can also be invulnerable: press the plus key to negate any damage you've taken!" Talk about using the force; Darth Vader won't stand a chance.

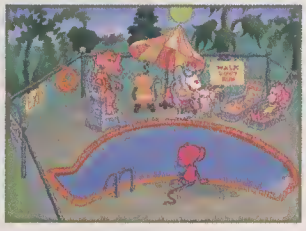
Give Your Kids a Crash Course in Safety.

CD-ROM Windows™ & Macintosh®

Introduce your kids to Swingland, home to the wildest characters this side of the jungle – Safety Monkey and his fun-loving friends Clunky, Grandma, Megan, Baby, Mayor and Farmer Monkey. If your kids can make Swingland safe again, they'll even meet Pinky, Safety Monkey's pet elephant. So get your kids Safety Monkey – it's a crash course in fun...and safety.

See your favorite software retailer or call (800) 432-1332, Dept. 365.

- **Caribbean style songs**
- **Colorful cartoon animations**
- **16 different locations**
- **Dozens of safety tips**
- **Developed by Mayo Clinic pediatricians and child psychologists**



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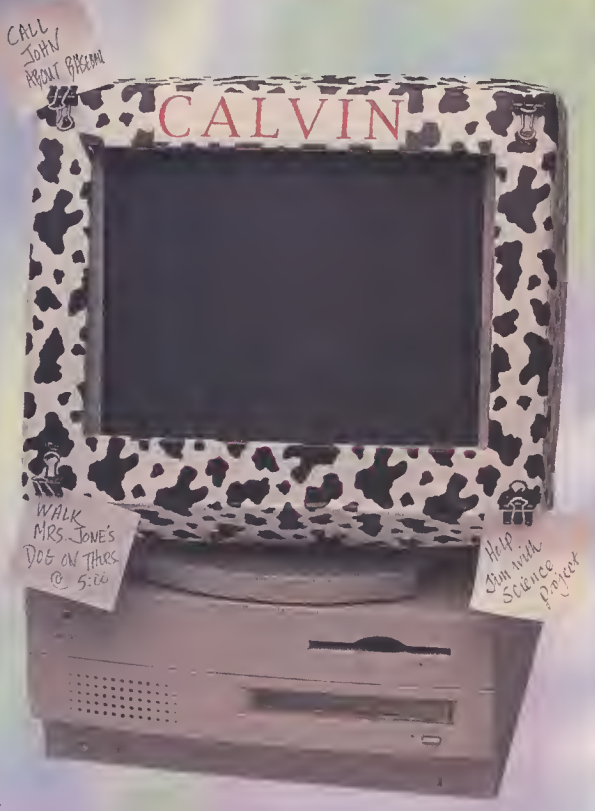
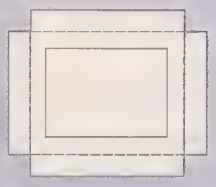
MEGAcool

STYLIN' SCREENS

Make a screen frame that puts a smile on your computer's face



HAVE YOU EVER wondered why computers come only in boring colors? Do your stick-on notes keep falling off your computer and getting swept under the desk? A homemade screen frame made of cardboard and decorated with contact paper, metal paper clips, designs, and letters created with a word processor is a great way to give your computer a fun (and functional) face-lift. Here's how:



1 Trim a large piece of cardboard so it is 4 inches longer and wider than your computer screen's outside dimension (the glass, not the outer plastic frame).

2 Mark the center point of your cardboard using a ruler and a pencil. Measure the glass surface of your screen. Using the center mark as a guide, pencil in the dimensions. Do the same for the outside edge of the plastic frame.

3 Using a craft knife, cut out the inner rectangle (for your screen), and then scribe (don't cut through completely) the outer rectangle so you can easily fold over the edges. Cut out the corners, fold back the cardboard, and tape it to complete the frame.

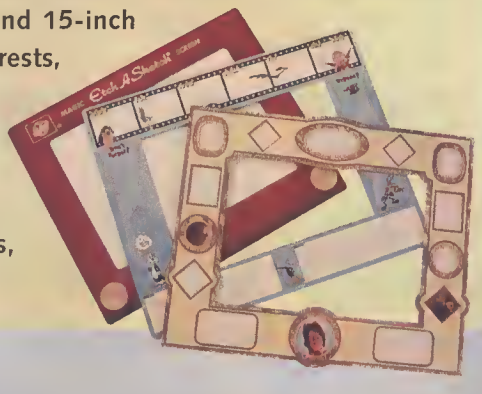
4 Cut a piece of contact paper an inch wider and longer than your original piece of cardboard. Place your frame face-down on the contact paper and cut a smaller rectangle for your screen, leaving an extra half-inch to fold over the inside edge. Apply carefully. White contact paper works great, but you can choose a fun pattern to better reflect your style.

5 Using your word processor, print out the name of your computer in large outlined letters. Color the letters with markers, cut them out, and paste them to the frame. Finally, glue paper clips to the corners or along the bottom. (Don't put them across the top, or your notes will obscure the screen.)

6 To attach, punch holes halfway up on both sides of the screen frame. Tie elastic thread so your monitor can wear the frame like a mask.

Premade Screen Frames

Not feeling particularly creative, but looking to give your computer a new look? Then check out the creations from Screenies. For between $5 and $10, you can take your pick from some fifty frame designs, all premade to fit 13-inch, 14-inch, and 15-inch screens. Designs include rain forests, space stations, wipe-off boards, and even Screenies with precut frames for favorite pictures. Screenies are sold at OfficeMax, Staples, and Computer City stores, or call 800-959-6190.



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FamilyPC

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What stories in this issue interested you most?

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Keeping Pace *(p. 20)*				
Software New Products *(p. 28)*	☐	☐	☐	☐
Hardware New Products *(p. 30)*	☐	☐	☐	☐
Help!				
Troubleshooting *(p. 39)*	☐	☐	☐	☐
Hot Tips *(p. 40)*	☐	☐	☐	☐
Shortcuts *(p. 42)*	☐	☐	☐	☐
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Buried Treasure *(p. 46)*	☐	☐	☐	☐
Fun				
Flying Ace *(p. 55)*	☐	☐	☐	☐
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Arcade Action *(p. 64)*	☐	☐	☐	☐
What's On				
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Come On, Try These at Home *(p. 72)*	☐	☐	☐	☐
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Software Reviews *(p. 188)*	☐	☐	☐	☐

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Smart Cards *(p. 204)*	☐	☐	☐	☐
Creative Computing				
It's a Girl! *(p. 210)*	☐	☐	☐	☐
Nuggets from '94 *(p. 212)*	☐	☐	☐	☐
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My Great Idea				
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Step by Step *(p. 234)*	☐	☐	☐	☐
MEGAzine *(p. 241)*	☐	☐	☐	☐
Backspace *(p. 260)*	☐	☐	☐	☐

Date of birth of child/children:
Child 1 _____ Child 2 _____ Child 3 _____ Child 4 _____

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☐ Yes ☐ No

How long ago did you buy a computer?
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Do you intend to buy a computer in the next twelve months?
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☐ Yes ☐ No [SUR-4]

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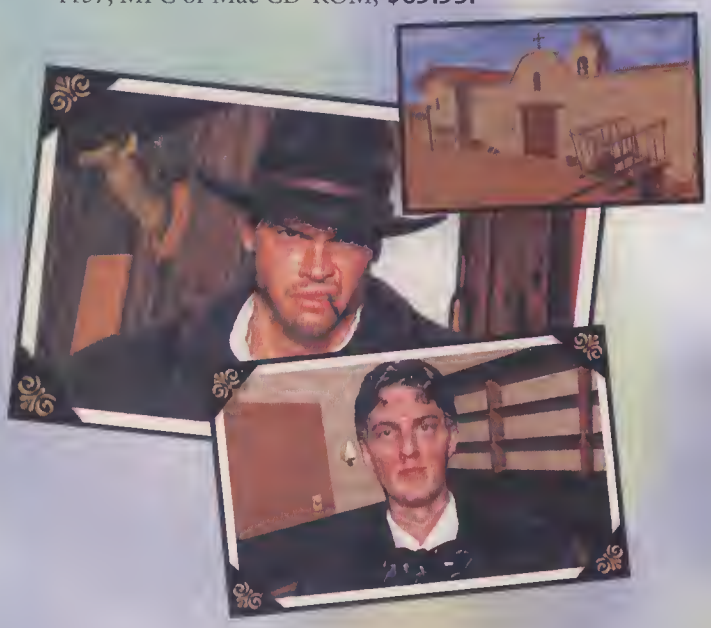
MEGAnews

Westwired, HO!

Dust: A Tale of the Wired West is a frontier adventure that puts you back in the saddle in the Old West. Due out in March, Dust has 3-D graphics that rival Myst's. Whether you earn your spurs or bite the dust depends on how well you play your cards. Happy trails.

Dust: A Tale of the Wired West by CyberFlix, 615-546-1157; MPC or Mac CD-ROM, **$69.95.**



BRAIN WAVES

TREAT YOUR EARS to music by Brian Eno (who has produced albums for U2, Talking Heads, and David Bowie) while treating your eyes to changing color patterns with Head Candy. This CD-ROM comes with 3-D glasses and turns your computer into a kaleidoscope. Forget the mirror ball and balloons and plug in this disc for some awesome background visuals during parties. You even get a free POG.

Head Candy by Navarre, 800-728-4000; MPC or Mac CD-ROM, **$39.95.**

PURCHASE POWER

WANT MORE GREAT software for your family and school? If your school buys software from Educational Resources, your parents can buy the same titles, and even games like Flight Simulator and SimCity, accessories such as NFL mousepads, home titles like Quicken, and printers and other hardware, for home use at prices below retail. In turn, the school gets a ten-percent discount on a future order. For a catalog, write to Parents Purchase Program, 1550 Executive Drive, Elgin, IL 60123, or call 800-624-2926.

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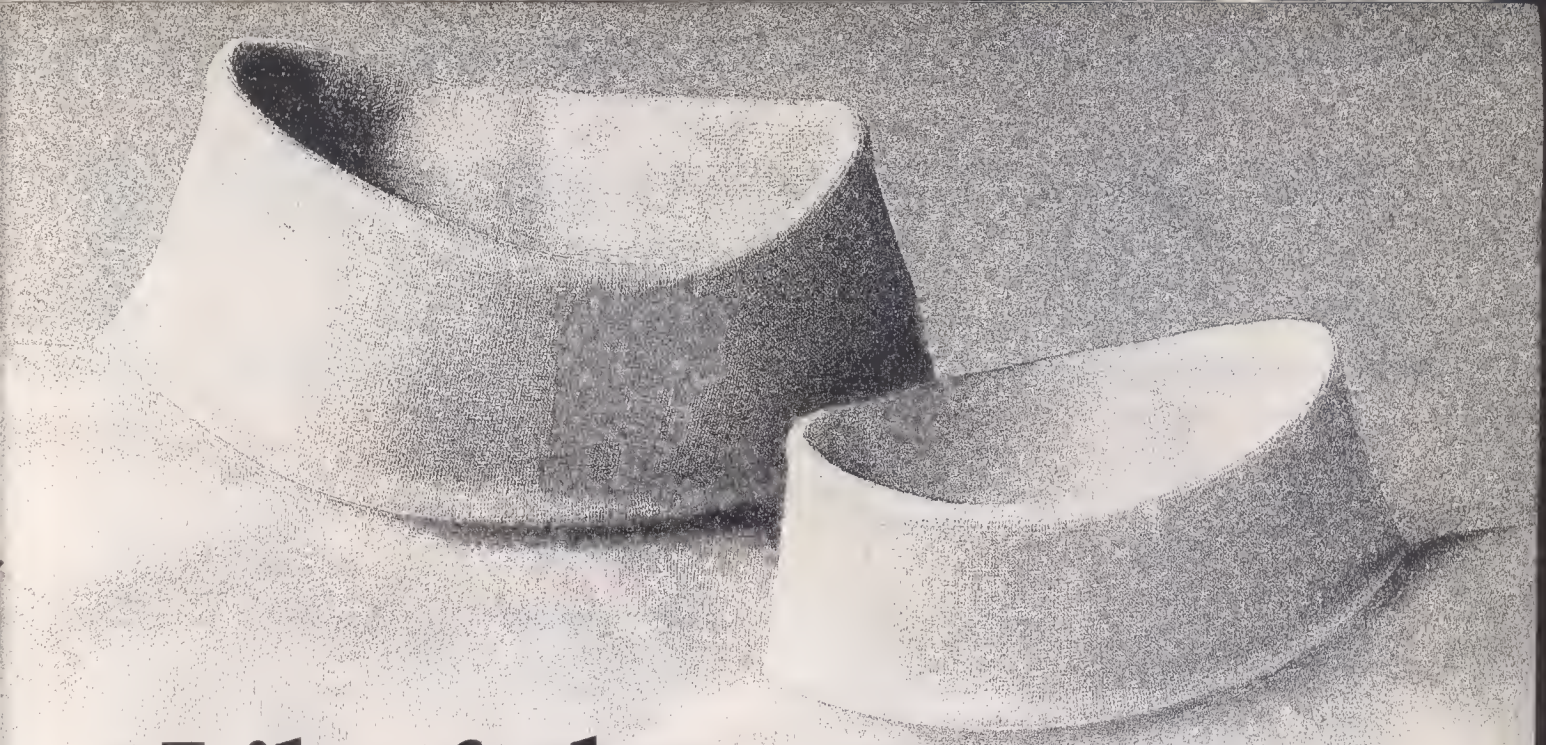

Like father, like daughter.

People say our kids' turtleneck is the spitting image of our adult turtleneck.

But then, we wouldn't have it any other way. At Lands' End,® we see no reason why clothes for kids shouldn't be made as tastefully, carefully and sturdily as clothes for grown-ups.

So, where we carry the same item for young and old, you'll find pretty much the same fabrics, construction details and niceties in both.

Niceties? Well take, for example, the collar of our kids' turtleneck. It's seamless, just like the collar of our adult turtles. We figure a seam in the collar can rub a kid's neck the wrong way, too.

Plus, our kids' turtle has a bit of extra Lycra® spandex where the neck connects to the shoulder: it *gives* a little when a head squiggles through. Just like our Daddy and Mommy version.

A chip off the old block, but...

Of course, we know kids will be kids. And, where there's a good reason to treat them differently, we do.

Take our cotton rugby shirt. The kids' version is a midweight cotton – a little lighter than our adult rugbys, to sit more lightly (and comfortably) on little shoulders.

And the buttons on our junior rugbys are rigid chalk. Not rubber buttons, which would be harder for tiny fingers to work through a buttonhole.

We do other things differently, too. Like keeping pins out of all our packaging for kids, for reasons too obvious to make a point of.

Pint-sized prices.

Like everything at Lands' End, our kids' stuff is priced fairly. It's not always the cheapest – but always an extremely good value for the money.

Our kids' turtlenecks, for instance, are only $10 (even less if you buy several).

Shopping for your kids at Lands' End couldn't be easier. Instead of dragging them to a busy, overcrowded mall, just drag yourself to a telephone and call us.

You'll find a warm, helpful voice on the other end whenever you call, day or night.

Usually, we'll fill your order in one day, deliver it almost anywhere just two business days later. And you can't go wrong, because all our kids' clothing is *unconditionally* guaranteed.

Just like our grownup things.

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For our free Kids' catalog, call **1-800-356-4444** (in Canada, too).

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*For item 124 please send check for $12.95 made payable to FamilyFun, for item 125 please send check for $12.95 made payable to FamilyPC. Allow four to six weeks for delivery. No international or Canadian orders please.

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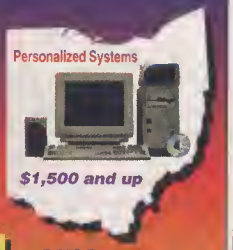

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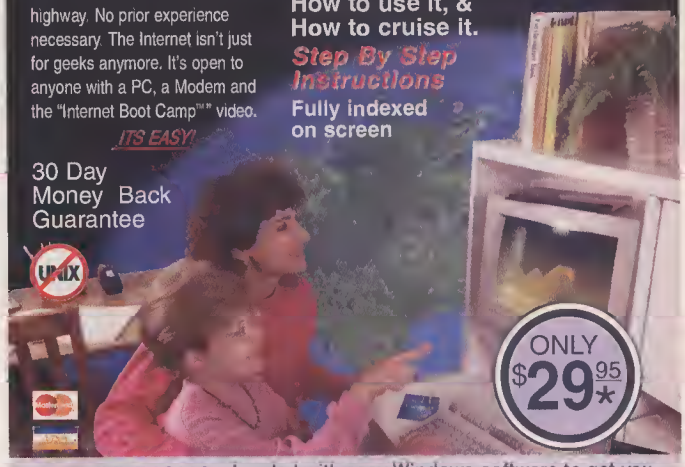

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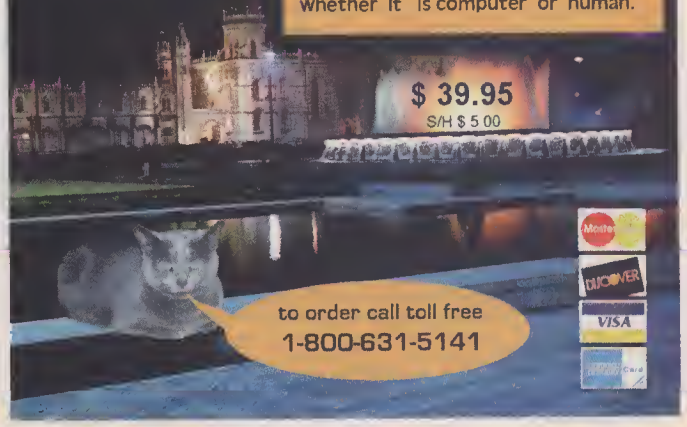

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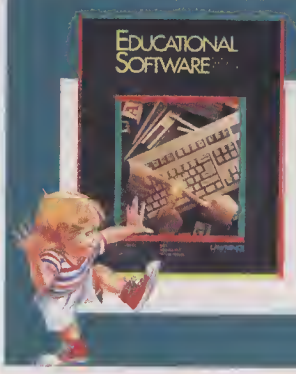

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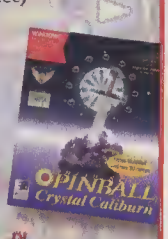

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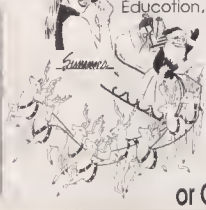

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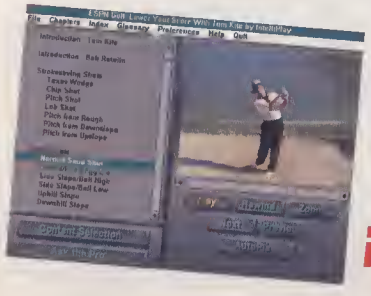

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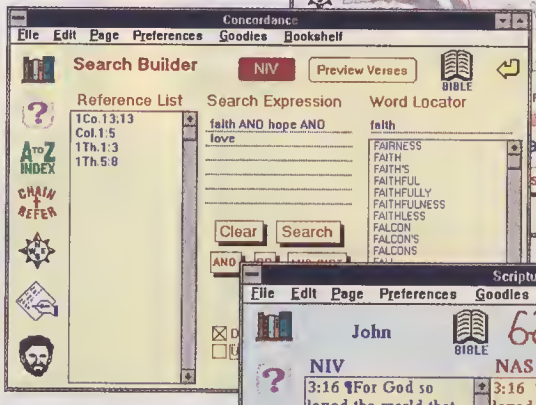

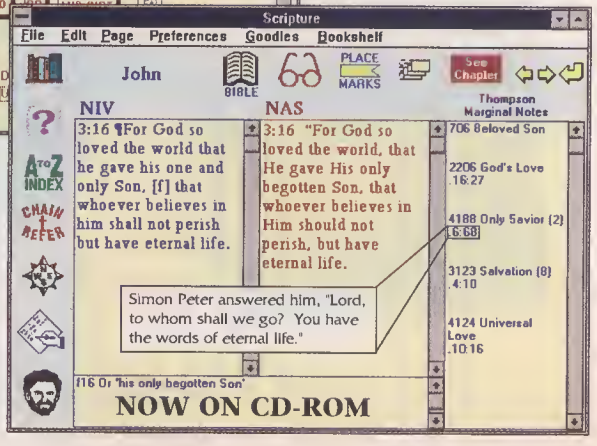

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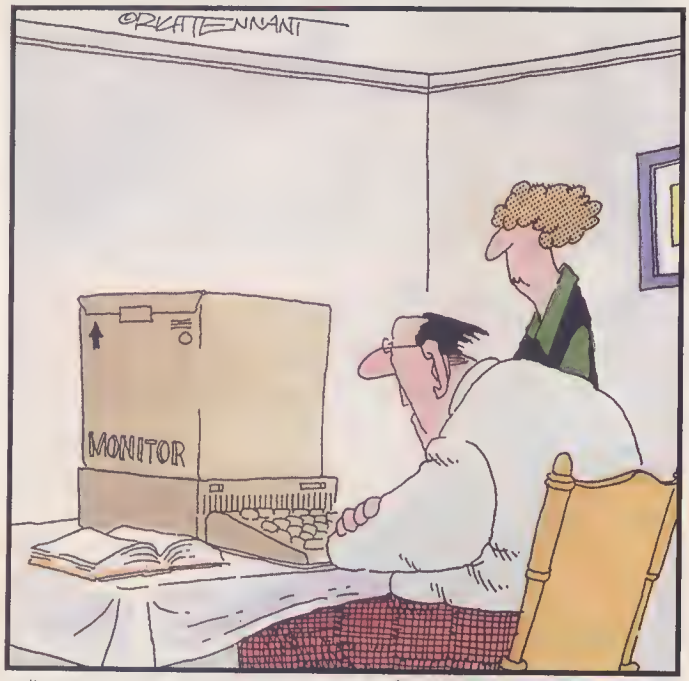
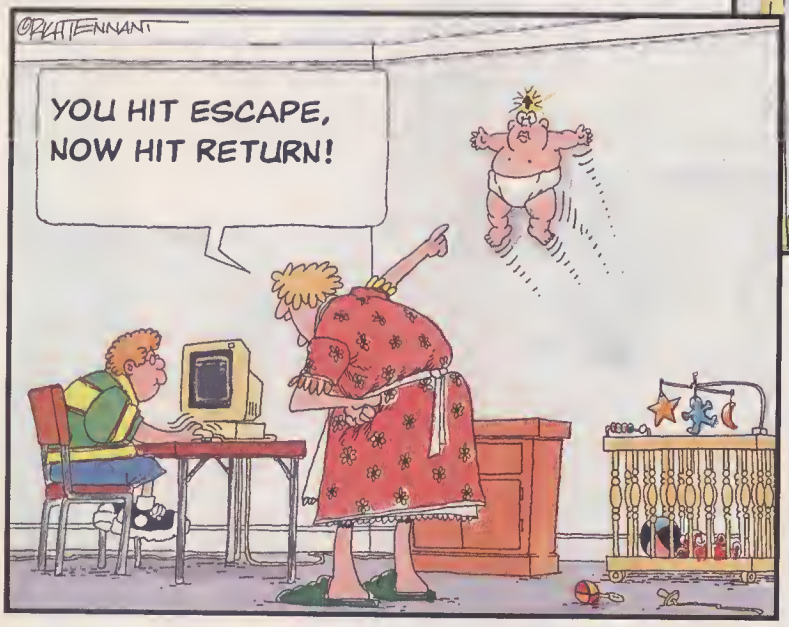
By Rich Tennant



"WELL, RIGHT OFF, THE RESPONSE TIME SEEMS A BIT SLOW."



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